

The Influence of Service Quality on User Satisfaction with Library Usage as the Intervening Variable

Case Study of Universitas Airlangga Library

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Abstract: This study aims to determine the effect of service quality on library usage and user satisfaction, the influence of library usage on customer satisfaction and the effect of service quality on the satisfaction of the user with library usage as the intervening variable. The hypotheses will be known as either a direct or indirect influence. The sampling technique used in this research was random, via an explanative quantitative method. In the results obtained from the calculation of the first hypothesis, it can be seen that there is a significant influence between the quality of service on library usage with a t count $>$ t table $2.091 > 1.98$. The calculations obtained from the second hypothesis show that there is a significant influence between the quality of service on reader satisfaction with a t count $>$ t table $5.963 > 1.98$. The calculations obtained from the third hypothesis show that there is a significant influence between library usage to the reader satisfaction with a t count $>$ t table $4.862 > 1.98$. The last hypothesis was that there is an influence from the service quality variable on the satisfaction of the user with library usage as the intervening variable with the direct influence result being 0.490 and the indirect influence being 0.080. However, the influence of the indirect variable still must be considered because it produces a bigger total influence; 0.57.

1 INTRODUCTION

In relation to library services, there are several important elements that form a unified library service, such as collections, human resources, buildings, infrastructure and most importantly, the actual services provided by the library. The success of a library is determined by some of these elements. If one element does not work properly, then it will affect the overall library services. This is because the library is a place to support the learning activities ongoing in universities, so it is important for libraries to pay attention to the quality of the services provided to its users. Terhile and Anthonisusus (2014) said that the services provided by academic libraries or college libraries serve as a support that will contribute to learning, academic research and meeting the teaching needs of the academic environment. The library users also expect that the library information materials are organised to facilitate accessibility.

Airlangga University Library, as a college library, is one of the important means involved in realising the Tri Dharma of College such as education, teaching, research and community service. This can be a reference for the academic community, in relation to fulfilling its information source needs. Furthermore, the provision of services to the users is one of the main advantages provided by the University of Airlangga Library as mentioned in the existing vision. Airlangga University Library also has a tagline and its own standards, especially in relation to providing services to users, which is already listed in the Manual of Procedures and Industrial Work integrated with the university.

Airlangga University Library is a library that is accredited (A). The library has met the level of standards and accreditation that university libraries are expected to guarantee. The assumption will be that the library is able to provide quality services and meet expectations and standards, including those of its librarian. This study has examined the effect of library service quality on the level of user

satisfaction, with library usage as the intervening variable.

2 METHODS

The research method used was explanative quantitative. The population in this research was all of the visitors to Airlangga University Library of Surabaya that used the services that exist in the library. This includes students, staff, lecturers and other students have used the University of Airlangga Library services. This was the population that became the object of this research. The total number of visitors to the University of Airlangga library so far is 28,381. Based on the calculations performed, the number of samples taken in this study amounted to 115 respondents. The sampling technique used in this research was random sampling using systematic sampling and the location of this research was the library of Airlangga University. This research used the data collection methods of a questionnaire, observation, interviews and a literature study.

3 RESULTS AND DISCUSSION

A validity test was performed to test the accuracy of the research instrument. In this study, the researcher used a pearson correlation technique using SPSS. The existing items are said to be valid if > 0.3008 (N: 115, significance level: 0.05).

Based on table 1, the variables contained in this study have a value of cronbach's alpha $> r$ table. It can be concluded that the overall variables used in this research are reliable.

Table 1: Reliability test results

Variable	Cronbach's alpha value	r value of table	Notes
Quality of service	0,945	0,3008	Reliable
Satisfaction	0,823	0,3008	Reliable
Library usage	0,847	0,3008	Reliable

Source: processed data

Based on the results of table 2, it can be seen that the results of the VIF value of the service quality variables and library usage was < 10 , with a VIF value of 1.070 and a tolerance value of > 0.1 , of 0.934 specifically. From these results, it can be seen that there is no correlation between the independent

variables and that they are free from multicollinearity. It can be concluded that in this study, there is no correlation between the independent variables.

Table 2. Multi-collinearity test results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
	(Constant)	-2.353	1.816				-1.296
X Quality of Service	.057	.011	.409	5.131	.000	.934	1.070
Z Library usage	.236	.059	.316	3.964	.000	.934	1.070

a. Dependent Variable: Y Satisfaction

Source: processed data

Based on the results of the heteroscedasticity test in table 3, it can be seen that the value of the significance of the service quality variable was 0.186 and the library usage variable was 0.133. This shows that the value of the variable was > 0.05 , so it can be said that there is no heteroscedasticity. It can thus be concluded that this study is free from heteroscedasticity.

Table 3. Results of heteroscedasticity test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
	(Constant)	1.654	1.130		
X Quality of service	-.009	.007	-.128	-1.329	.186
Z Library usage	.056	.037	.146	1.514	.133

a. Dependent Variable: RES2

Source: processed data

Based on table 4, it can be seen that the normality test in this study resulted in a significance value for the X variable of 0.120, with Y being 0.098 and Z being 0.071. The value of significance resulting from the three variables was > 0.05 . This shows that all of the variables in this study can be concluded to have a normal distribution. Based on

the results of the regression analysis, the regression of the path coefficient estimation can be described (See table 5).

Table 4. Normality test results

One-Sample Kolmogorov-Smirnov Test				
		X	Z	Y
N		115	115	115
Normal Parameters ^{a,b}	Mean	151.50	20.41	11.11
	Std. Deviation	15.924	2.985	2.223
Most Extreme Differences	Absolute	.111	.120	.115
	Positive	.094	.099	.110
	Negative	-.111	-.120	-.115
Kolmogorov-Smirnov Z		1.186	1.291	1.228
Asymp. Sig. (2-tailed)		.120	.071	.098
a. Test distribution is Normal.				
b. Calculated from data.				

Source: processed data

Based on the results of the path coefficient estimation, the structural equation can be written as follows:

- Library usage = 0.193quality of service + e1
- Satisfaction = 0.490 service quality + 0.416 library usage + e2

Table 5: Regression test result

Variable	t (sig) value	t value	Standard coefficient beta	VIF value
Quality of service (X) on library usage (Z)	0,039	2.091	0,193	1,070
Quality of service (X) on Satisfaction (Y)	0,000	5,983	0,490	1,070
Library usage (Z) on Satisfaction (Y)	0,000	4,862	0,416	1,070

Source: processed data

Based on table 6, the variable quality of service (X) was significant, or in other words, H0 is rejected. This can be seen from the value of the t arithmetic, as the service quality variable is 2.091. The value is greater than the value of the t table of 1.98 and the probability significance of 0.039 is far below 0.05 or significance ≤ 0.05 .

Based on table 7, the variable of quality of service (X) is significant, or in other words, H0 is rejected. This can be seen from the value of the t arithmetic, as the service quality variable was 5.983.

The value is greater than the value of the t table of 1.98 and the probability significance of 0.000 is far below 0.05 or significance ≤ 0.05 .

Table 6: Result of the regression test on service quality and library usage

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14,928	2,636		5,664	,000
X Quality	,036	,017	,193	2,091	,039

a. Dependent Variable: Z_Usage

Source: processed data

Table 7: Results of the regression test on service quality and satisfaction

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	,739	1,744		,424	,673
X Quality	,068	,011	,490	5,983	,000

a. Dependent Variable: Y_Satisfaction

Source: processed data

Based on table 8, the variable of library usage (Z) was significant, or in other words, H0 is rejected. This can be seen from the value of the t arithmetic for the library usage variable of 4.862. The value is greater than the value of the t table of 1.98 and the probability significance of the 0.000 value is far below 0.05, or significance ≤ 0.05 .

Table 8: The results of the library usage regression test on satisfaction

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	4,791	1,314		3,645	,000
Z_Usage	,310	,064	,416	4,862	,000

a. Dependent Variable: Y_Satisfaction

Source: processed data

The theoretical framework of this research explains the relationship between the variables of library service quality and library usage, library service quality and library user satisfaction, library usage and library user satisfaction, and library service quality and library user satisfaction with library usage as the intervening variable.

The items used in this study were tailored to the relevant literature. This research refers to Fatmawati (2013), with the LibQual + TM version consisting of several items that make up the LibQual 3 dimensions, such as affect of service (AS), library as place (LP), and information control (IC). Each item was given a scale of 1-5, with a higher value showing there to be a better impression. This research used the concepts of user satisfaction and library usage.

Kotler in Fatmawati (2013) stated that service quality is a form of consumer appraisal. In this context, the user's judgment on the level of service was received at the same time as the expected service. If the service received was in accordance with what was expected then it will affect the library usage. This is in accordance with table 6. Based on the results of the data processing conducted, we obtained the result that there was a significant influence at play between the quality of service and library usage with a positive direction. The result was obtained from the hypothesis testing as shown in the result chapters and analysis. It is known that service quality (X) has an effect on library usage (Z) at Airlangga University Library, with the t value for the service quality variable equal to 2.091, which is bigger than the t value in table 1, which is 98. It can be interpreted that H0 was rejected and that H1 was accepted. It can also be said that the service quality variable has a significant influence on library usage.

Based on the results of the data processing conducted, we obtained the results that there is a significant influence between the quality of service and the satisfaction of the users. As expressed by Rowszkowski et.al (2005), quality of service is a benchmark used to show the satisfaction of the service recipient. Based on the results of the data processing, there is a positive influence between the quality of service and the satisfaction of the user in a positive direction. The result was obtained from the hypothesis testing which was done in the results chapter as part of the integrated analysis. It is known that service quality (X) has an influence on the satisfaction of the users (Y) at Airlangga University Library, with the t value of the service quality variable being 5.983 times bigger than the t value in table 1, which was 98. So it can be interpreted that

H0 is rejected and that H2 has a significant influence on the satisfaction of the users.

Based on the results of the data processing performed, we obtained the result that there is a significant influence and relationship between library usage on the satisfaction of the users in a positive direction. It is known that library usage (Z) has an effect on the satisfaction of the visitor (Y) at the library of Airlangga University with the t value result for the service quality variable being 4.862 times bigger than the t value in table 1 of 98. It can be interpreted that H0 is rejected and that we can accept H3. It can also be said that the library usage variables have a significant influence on the satisfaction of the users. Therefore, it can be interpreted that if the library usage that is experienced by the readers is good and therefore higher, then the satisfaction of the users will also be higher. This is in line with the results of the research conducted by Moses (2016), stating that library usage has a significant influence on user satisfaction.

In this study, besides testing the direct effect, we also tested the indirect effect. The fourth hypothesis suggests that the quality of service affects the satisfaction of the visitors through library usage as the intervening variable at Airlangga University Library – thus, it is acceptable. An indirect coefficient value of 0.080 was obtained from multiplication between the direct influence of service quality on library usage and from library usage on the satisfaction of the users. The result of the coefficient of the indirect effect - if compared with the results of the coefficient value of direct influence between the quality of service on the satisfaction of the users - is equal to 0.490. It thus can be seen that the direct influence is greater than the indirect influence. Moses' research (2016), which was a reference in this study, resulted in a direct coefficient of 0.01 and an indirect coefficient of 0.29. Therefore it can be seen that there are studies using the intervening library usage variables resulting in different path coefficients. It is necessary to consider the indirect effect in decision making. In addition, if the library has also noticed the indirect effect, then this will result in the total influence obtained being the addition of the direct influence of service (X) variable on the satisfaction of the user (Y) and the indirect effect of service quality (X) on satisfaction (Y) with library usage (Z) as an intervening variable. The result was $0.490 + 0.080 = 0.57$.

4 CONCLUSIONS

This study discusses the influence of service quality on the satisfaction of the user with library usage as the intervening variable in the University of Airlangga University Library. Based on the results of the testing, data analysis and discussion done in the previous chapter, the results of this study can be used to conclude that there is a significant influence between the quality of service and library usage at the Library of Airlangga University. The results obtained from the value of the t arithmetic on service quality were 2.091 while the t table was 1.98. It can be concluded that $2.091 > 1.98$ with a significance level of $0.039 < 0.05$. It thus can be interpreted that we can reject H_0 and accept H_1 . It can also be concluded that if the level of service quality obtained by the users is higher, then the library usage will also be higher and vice versa.

There is a significant influence between the quality of service and the satisfaction of the users in Airlangga University Library. The results obtained from the value of the t arithmetic on service quality were 5.963, while the t table was 1.98. It can be concluded that $5.963 > 1.98$ with a significance level of $0.000 < 0.05$. It can be interpreted that we can reject H_0 and accept H_2 . It can also be concluded that if the level of service quality obtained by the users is higher, then the satisfaction will be higher and vice versa.

There is a significant direct influence between the quality of service and the satisfaction of the user with library usage being the intervening variable at Airlangga University Library. The result was obtained from multiplication between the beta value of X to Z and beta Z to Y, that was $0.193 \times 0.416 = 0.080$. Based on the calculations, it can be seen that the value of direct influence was 0.490 and that for indirect effect, it was 0.080. From the results of this study, it is known that the direct effect is greater than the indirect influence, while in the previous research results, indirect influence was greater than the direct effect. The library should still pay attention to indirect influence. This is because the total influence value, if we pay attention to the indirect influence, will result in a bigger effect resulting from the addition of the direct and indirect influence together. This was $0.490 + 0.080 = 0.57$. From the third hypothesis, it can be known that library usage affects the satisfaction of the user.

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