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The Effect of System Quality, Information Quality, and Service Quality on User Satisfaction in the ELMAD Application in MAN 1 Malang City

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ABSTRACT

This research was conducted to find out how system quality, information quality, service quality, and ELMAD user satisfaction at MAN 1 Kota Malang. The quality of the information system in the ELMAD application system is the ability of the system itself, which is how much the information technology system is reliable and in accordance with the needs and expectations of its users. It can be said that users believe that the ELMAD application information system that is used is running well, they will be satisfied and feel the benefits of the information system. The population of this research is class XI students of IPS MAN 1 Kota Malang for the odd semester 2023 academic year with a total of 102 students. The sampling method used is the census method with active class stratified criteria and uses the K13 curriculum. For the sampling technique using non-probability sampling (not random). The results of this study indicate that system quality, information quality, service quality have a significant positive effect on user satisfaction of the ELMAD application at MAN 1 Malang City. The results of this study are implemented on system quality, information quality and service quality in the ELMAD application at MAN 1 Malang City which has been going well, but still needs to be improved in the use of the ELMAD application such as providing training to users in implementing a good ELMAD application, so that users maximize the operation of the application.

INTRODUCTION

System quality There is an ability to measure system quality that is influenced by ease of use, ease of learning, system features, system accuracy, flexibility (Nizarudin, 2018). The use of technology in educational institutions cannot be separated from information systems and technology, so that new strategies emerge in an effort to improve the quality of systems and services of new, competitive educational institutions (Kustina et al., 2022). In addition, for the managers of the institution, it is expected to improve the quality of services in winning the competition within the community as users, so that the community feels satisfaction with the services provided by the educational institution. In an effort to improve service performance, you must be good at taking opportunities and determining the right strategy along with the development and rise of technology today (Gani, 2018). Madrasah Aliyah Negeri 1 Malang City is an Islamic nuanced educational institution within the scope of the Ministry of Religious Affairs of Malang City.

The existing study programs consist of MIPA, Social Studies, Language and Religion. There are many majors, of course, there are also many developments that have been achieved by MAN 1 Malang City. MAN 1 Malang City has made various achievements, including in the world of science and technology. Research findings from Mia have shown that many ELMAD Application users provide satisfaction through survey assessments and some of them also provide recommendations to other Madrasahs/Schools for a Comparative Study to MAN 1 Malang City has not produced concrete evidence related to service user satisfaction (Rusdiana, 2015). The use of e-learning systems can make students improve learning in class and outside the classroom. E-learning can be used for

individuals and groups. The findings of the study conducted by Nisrina Nur Asyifa show that there is a direct positive influence of the independent variables, namely System Quality, Information Quality, Service Quality and Ease of Use on the dependent variable, namely User Satisfaction (Bahrudin & Zuhro, 2016). Meanwhile, Christy Elsa Ulita stated that the variables of system quality, information quality, and service quality have a significant influence on customer satisfaction (Cahyadi et al., 2020). Quality of information system ELMAD application output of information system for decision making in MAN 1 Malang City. The information quality of the ELMAD application system affects user satisfaction, if the better the quality of information, it has an impact on user satisfaction (Ulita & Sutrisna, 2019). The main purpose of this study is to determine the effect of system quality, information quality, service quality, and ELMAD user satisfaction in MAN 1 Malang City.

METHOD

This study used quantitative methods. The population in this study is employees in class students recorded in the ELMAD Application (E-Learning Madrasah) MAN 1 Malang City as many as 102 people. The sampling technique used is non-probability sampling with the census method. The research instrument used a questionnaire with a Likert scale of 1 to 5. The type of data obtained from the distribution of questionnaires is interval data. Data analysis techniques using linear regression using SPSS 24 analysis. This study used an independent variable, namely system quality (X^1), Information Quality (X^2), Quality of Service (X^3).

RESULTS AND DISCUSSION

The results of the study were carried out in several steps, testing in this study can be described as follows:

1. Research Instrument Test Results

Validity tests are carried out to test the accuracy of the instrument in knowing that the instrument has carried out the measurement function. The validity test is used to compare the correlation value of each statement item with the correlation value of table t. The value of R is the magnitude of *product moments* at alpha = 0.05 &; n = 102 of 0.1946. Question items indicate that the value of the correlation coefficient is positive and greater than the table r or r table is also a probability smaller than alpha, so there is a significant relationship between the score of each question item and its total score. The significant correlation shows that the question items can really be used to measure the instrument variables used are valid and can be used in research. Reliability tests are used to determine how much the level of accuracy and the measuring instrument can be trusted. The reliability test results are described in table 1.

Table 1. Reliability Test Results

Variable	Reliability Coefficient	Result
System Quality	0,883	Reliable
Quality of Information	0,853	Reliable
Quality of Service	0,907	Reliable
User Satisfaction	0,857	Reliable

The test results showed that the instruments used in this study were reliable. Validity is assessed by comparing the correlation value of each statement item with the correlation table (r table). The r value of the product moment table at alpha 0.05 is 0.1946. The results of the reliability test show that all variables have a reliability coefficient value greater than Cronbach's alpha value of 0.60, the largest value is in the service quality variable which is 0.907, and the lowest value in the information quality variable is 0.853 so that the tested instrument is worthy of the research conducted.

2. Descriptive Test Results

The research instrument used a questionnaire with a Likert scale. The type of data obtained from the results of the distribution of questionnaires is data that is interval. In the distribution of quantitative analysis questionnaires, the weighting of answers is given an answer score. Descriptive testing was carried out to find out respondents' answers conducted using questionnaire data collected in the study. The results of the descriptive test can be seen in table 2.

Table 2. Analysis Results Description

System Quality	Mean	Quality of Information	Mean
Facilities	3,70	Timeliness	3,86
Fast Access	3,52	Availability	3,40
System Reliability	4,11	Accuracy	3,83
Flexibility	1,96	Conformity	3,86
Security	2,94	Relevant	4,00
Quality of Service	**Mean**	**User satisfaction**	**Mean**
Physical Evidence	3,84	Efficiency	3,52
Responsiveness	3,82	Effectiveness	3,78
Guarantee	3,86	Satisfaction	3,84
Empathy	3,96		

The results of system quality testing, the system reliability indicator gets the highest score of 4.11 which shows that respondents tend to agree that System Reliability is an indicator that affects System Quality. The average system quality variable was 3.76. This shows that respondents tend to agree with the quality of the system used formed with ease, speed of access, system reliability, flexibility, and security. Information Quality Testing, an indicator of clarity of purpose gets the highest score, which is 4.00. It is shown that respondents agree that if the information in the ELMAD Application provides benefits for students, then the indicator affects the Quality of the System. Overall, the quality of information obtained a score of 3.81. This shows that respondents tend to agree on the quality of information formed with timeliness, availability, accuracy, suitability, and relevance.

The service quality indicator received the highest score of 3.96, which indicates that respondents tend to agree with the Empathy indicator. It was shown that ELMAD Apkilasi officers were willing to solve user problems. Therefore, user satisfaction with Layaan Quality has a significant effect as evidenced by the distribution of questionnaires in MAN 1 Malang City. The results of user satisfaction testing, the satisfaction indicator got the highest score of 3.84. This shows that respondents tend to agree that the ELMAD Application System has never complained about the services implemented by MAN 1 Malang City. Therefore, the Efficiency indicator affects the User Satisfaction variable.

3. Classical Assumption Test Results

Classical assumption tests can provide certainty that the regression equation obtained has a fixed estimation that cannot and is consistent. The following are the results of testing the classic assumptions of the study. Regression analysis must meet classical assumptions, including:

a. Multicollinearity Test

The multicollinearity test is used in testing for correlations and strong relationships between 2 or more independent variables in one multiple regression model. A regression model is free from multicollinearity if the VIF *(variance inflation factors) value* of each independent variable is less than 5 and the tolerance value is close to one. From the VIF results are shown the following table 3:

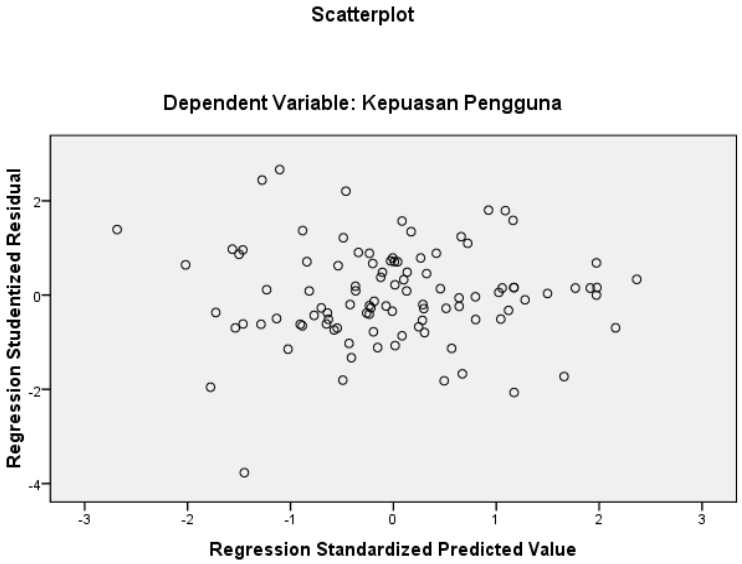
Table 3. Multicollinearity Test Results

Model	Collinierity Statistic	
	Tollerance	BRIGHT
Equation 1	0,992	1,008
Equation 2	0,997	1,003
Equation 3	0,995	1.005

Based on the results of VIF calculations seen regarding System quality, Service Quality, Information Quality and Training have a VIF (variance inflation factors) value smaller than 10, it can be concluded that the regression has no multicollinearity problem.

b. Heteroscedasticity Test

Detect heterskedasticity by using scatter plots between ZPRED and SREDSID. If the points in the scatterplot do not form a certain pattern and spread above &; below zero the Y axis and there is no heteroscdedasticity in the regression model and vice versa. Heterokedasticity was tested using scatterplots. The results of the heteroscdedasticity test are shown in the following figure:



The results of heteroscedasticity testing show that the points of distribution irregularly, no special pattern is clearly formed scattered below and above the zero value of the Y axis. This means that the equation studied in this study does not occur heteroscedasticity.

c. Normality Test

The purpose of this normality test is to measure independent and dependent variables with normal or abnormal distributions. In detecting normality, it can be done by analyzing the spread of points on the diagonal axis, that is, if the spread is around the diagonal line and follows the direction of the diagonal line, then this indicates that the data has been distributed normally. The results of normality testing in this study are:

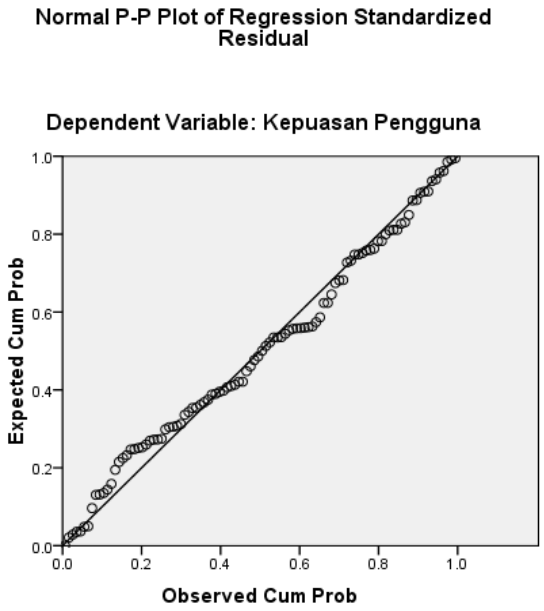


Figure 4. Normality Test of Equations 1,2, and 3

If the data spreads around the diagonal line & follows the direction of the diagonal line or histogram graph, the regression model satisfies the normality assumption. Based on figure 4 above, it shows that the dots evenly distributed around the diagolal line and in the direction of the diagram indicate that the spread of points above is around the diagonal line, it shows that the research variables in equations 1, 2, and 3 studied in this study are normally distributed. Based on the calculation results, the total coefficient of determination value with a value of 0.859 shows the variation of data that can be explained in the research model, which is 85.9% or in other words, the information covered in the 85.9%

data can be explained in the research model.

4. Results of Linear Regression Analysis

Linear regression analysis is used to measure the strength of influence between two or more variables to show the influence between exogenous and endogenous variables. Linear analysis is also intended to measure the intensity of the relationship between two or more variables as well as predict the approximate values obtained using standard beta coefficients. The results of linear regression testing in this study are described in table 5.

Table 5. Coefficient of Linear Regression Analysis Results

No	Variable	N	Minimum	Maximum	Mean	Std. Deviation
1.	System Quality	02	24	50	8.38	
2.	Quality of Information	02	13	35	6.55	
3.	Quality of Service	02	11	40	1.00	
4.	User Satisfaction	02	8	20	4.68	

This research states that service quality has a significant effect on ELMAD user satisfaction in MAN 1 Malang City. Quality of service is a service in the form of application updates and developer reviews in existing applications. The distribution of respondents' answers with the overall Service Quality variable had the highest average of 3.96 with the Empathy indicator. It is shown that ELMAD Application officers are willing to solve user problems. Service quality is a reflection of users' evaluative perceptions of the services received at a certain time. Better empathy on service quality will further increase the use of ELMAD Application. The service on the ELMAD Application is very competent and provides good direction for users in MAN 1 Malang City. So that users are satisfied in the services provided and there are no complaints against the service.

This research is in line with research conducted by Purwanto, Suharno (2017) The influence of system quality, information quality, and service quality has a significant effect on the use of e-learning systems in the Mercu Buana University Postgraduate Program. Service quality is determined based on the importance of service dimensions. The quality of service in the ELMAD application system can affect user satisfaction, if the better the quality of service produced in this case can be seen from physical evidence, responsiveness, assurance and empathy, the more appropriate it will be in user decision making.

CONCLUSION

Based on the results of the hypothesis test, the conclusion in this analysis is that the results of descriptive analysis show that the quality of the system aims to measure the quality of the technological system. System quality is a measure of information system processing that focuses on the interaction between users and systems. If the quality of the information system is good according to user perception, then they will feel satisfied with the quality service of the ELMAD Application system in MAN 1 Malang City.

In connection with what has been described above with the things that have been described, researchers can provide suggestions by understanding that user satisfaction can be influenced by system quality, information quality, and service quality, it is hoped that future research can use better research instruments, so that users are expected to feel the obligation and responsibility to provide true research data. The implementation of system quality, information quality and service quality in the ELMAD application in MAN 1 Malang City has been going well, but it still needs to be improved in the use of the ELMAD Application such as providing training to users in the implementation of a good ELMAD Application, thus making it easier for users to input. The ELMAD application needs to be updated so that it is easily accessible and there is no human error.

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