Journal of Artificial Intelligence and Engineering Applications

Website: https://ioinformatic.org/

15th October 2025. Vol. 5. No. 1; e-ISSN: 2808-4519

User Satisfaction Analysis on the Quality of Lapisbogor.co.id Website using the Webqual 4.0 Method

Moses Aripin Indah Setiawan[1], Kudiantoro Widianto[2], Syaifur Rahmatullah AR[3*], M. Iqbal Alifudin[4], Irmawati[5]

[1,2,4,5]Universitas Bina Sarana Informatika
[3]Universitas Nusa Mandiri
cococran123@gmail.com[1], kudiantoro.kdw@bsi.ac.id[2], syaifur.syl@nusamandiri.ac.id[3*], m.mif@bsi.ac.id[4], irmawati.iat@bsi.ac.id[5]

Abstract

Website quality is a vital element for the sustainability and customer satisfaction within the digital business landscape, especially for prominent brands like Lapis Bogor Sangkuriang that rely on an online presence. This study was designed to investigate the impact of website quality, measured by WebQual 4.0 (encompassing Usability Quality, Information Quality, and Service Interaction Quality), on user satisfaction with the lapisbogor.co.id website. A quantitative approach was applied through the dissemination of questionnaires to 150 respondents who are users of the Lapis Bogor Sangkuriang website. Regression analysis results indicate that all three WebQual 4.0 dimensions collectively have a significant influence on user satisfaction. This finding suggests that the website quality of Lapis Bogor Sangkuriang has successfully met user expectations, with website quality variables contributing approximately 58% to the perceived satisfaction level. Therefore, this research recommends that Lapis Bogor Sangkuriang continue to invest in monitoring and improving its website quality. Continuous efforts in optimizing the WebQual 4.0 dimensions will be crucial for maintaining a positive user experience and strengthening the company's competitive position in the market.

Keywords: *WEBQUAL 4.0, Lapis Bogor Sangkuriang, User Satisfaction*

1. Introduction

In today's digital era, internet penetration in Indonesia continues to increase, encouraging more small and medium-sized enterprises (SMEs) and food retail businesses to optimize their online channels through websites. A website not only functions as a product showcase but also serves as a primary medium of interaction that determines user experience and satisfaction. In the context of local souvenir businesses such as Lapis Bogor (lapisbogor.co.id), a high-quality website is essential to facilitate online ordering, customer service, and brand image in the digital landscape. Website quality has been proven to have a significant impact on user satisfaction, user loyalty, and repurchase intention across various e-commerce and online service contexts [1]. Websites have become one of the main platforms for companies, educational institutions, and government agencies to deliver services, promote products, and engage with users [2]. For small and medium enterprises (SMEs), website quality plays a crucial role in shaping brand image, maintaining customer trust, and influencing user satisfaction [3]. The [LapisBogor.co.id] website serves as the main digital platform of [Lapis Bogor Sangkuriang], a well-known local souvenir brand in Indonesia. It functions as both an information portal and an online ordering platform for customers across different regions. The quality of a website strongly influences user perceptions of reliability, usability, and purchase intentions [4]. Therefore, assessing website quality is crucial to ensure user satisfaction and strengthen the brand's online presence [5]. One of the most widely adopted frameworks for evaluating website quality is WebQual 4.0, developed by Barnes and Vidgen. This model measures quality from the end-user perspective through three dimensions: usability, information quality, and interaction quality. These dimensions have been widely used to evaluate the extent to which websites meet user needs, expectations, and satisfaction [2]. Numerous studies in Indonesia have applied the WebQual 4.0 model across various contexts. student satisfaction with a digital library website and found that all WebQual dimensions positively affected user satisfaction. Similarly, [2] evaluated the quality of an e-learning website and concluded that information quality was the most dominant factor influencing satisfaction [4] demonstrated that interaction quality played a critical role in building user trust on public service websites, while [5] highlighted usability as the most influential factor for academic institution websites. In commercial website studies, [3] combined WebQual 4.0 with the *User Experience Questionnaire (UEQ)* and McCall model, concluding that a multi-method approach provided more comprehensive insights into user perceptions. [6] modified the WebQual 4.0 model using *Importance–Performance Analysis (IPA)* to assess a university website and identified performance gaps between user expectations and actual experience. Meanwhile, [7] applied WebQual 4.0 to government websites and emphasized alignment between *usability* and official government standards. In a corporate context, [8] used the WebQual–IPA model to evaluate the Telkomsel website and found *interaction quality* as the key determinant of satisfaction. Similarly, [9] observed that *information quality* had a major influence on user satisfaction for university study program websites. In the public sector, [10] implemented WebQual 4.0 to assess a

Geographical Information System (GIS) website managed by the Pekalongan City Police Department, demonstrating that the model effectively measures institutional website quality for data-driven services. From these studies, it is evident that WebQual 4.0 has been effectively applied in diverse sectors—education, government, and commerce. However, its application in culinary-based SME websites remains limited [6]. Given the rapid growth of digital entrepreneurship in Indonesia, there is a growing need to evaluate website quality for SMEs to enhance competitiveness and online service experience. Based on this background, the present study aims to analyze user satisfaction with the quality of the [LapisBogor.co.id] website using the WebQual 4.0 model. This study evaluates the three main dimensions—usability, information quality, and interaction quality—to determine which dimension has the most significant influence on user satisfaction [2] .The results are expected to provide practical recommendations for Lapis Bogor Sangkuriang's website management team to improve digital service quality, while also contributing to academic research on WebQual applications within Indonesia's SME sector[3].

2. Research Method

The research strategy focuses on data collection through surveys using questionnaires, with data analysis carried out statistically using specialized software tools. To evaluate the quality of the lapisbogor.co.id website, this study applies the WebQual 4.0 framework, which encompasses three main dimensions: usability quality, information quality, and service interaction quality.

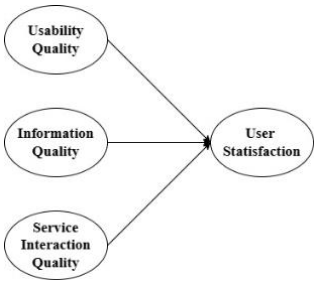

Fig. 1: Research Method

The research instrument, in the form of a questionnaire, consists of five (5) sections. The first section covers the respondent profile, consisting of three (3) questions: age, gender, and a question regarding the user's experience or the duration of their use of the lapisbogor.co.id website. The second to fifth sections contain 16 research questions, comprising 13 questions derived from the WebQual 4.0 model (3 variables) and 3 questions related to user satisfaction.
This study uses a five-point Likert scale, where the response options for each question range from "strongly disagree" (1) to "strongly agree" (5).

Table 1: Likert Scale

Scale	Response Option	Description
1	Strongly Disagree	The respondent completely disagrees with the statement.
2	Disagree	The respondent disagrees with the statement.
3	Neutral	The respondent neither agrees nor disagrees with the statement.
4	Agree	The respondent agrees with the statement.
5	Strongly Agree	The respondent completely agrees with the statement.

The research instrument, in the form of an online questionnaire, covers four (4) assessment dimensions: usability quality, information quality, service interaction quality, and user satisfaction level. The measurement method employs a five-point Likert scale system to obtain more detailed data. The questionnaire was distributed digitally via Google Forms, shared through various social media platforms.

Table 2: Research Question Instrument

Variable	Question	Code
Usability	The lapisbogor.co.id website is easy to learn how to use.	UQ1
	My interaction with the lapisbogor.co.id website feels clear and easy to understand.	UQ2
	Overall, the lapisbogor.co.id website is easy to use.	UQ3
	I find it easy to locate the information or products I am looking for on this website.	UQ4
	The lapisbogor.co.id website provides clear guidance or messages if I make a mistake while using it.	UQ5
Information Quality	The product information (description, variants, prices) on the lapisbogor.co.id website is accurate and reliable.	IQQ1
	The information on the lapisbogor.co.id website is always up to date.	IQQ2
	The website provides complete information related to Lapis Bogor Sangkuriang and its products.	IQQ3
	The information presented on the lapisbogor.co.id website is relevant to my needs.	IQQ4

Service Interaction Quality	The lapisbogor.co.id website responds quickly to my interactions (e.g., button clicks, form submissions).	SIQQ1
	This website has customer support or contact features (e.g., live chat, phone number, email) that are easily accessible and responsive.	SIQQ2
	I find it easy to communicate with Lapisbogor.co.id representatives through the available website features.	SIQQ3
	I feel safe and comfortable when making transactions or entering personal data on this website.	SIQQ4
User Satisfaction	I am satisfied with my experience using the lapisbogor.co.id website.	KPQ1
	The lapisbogor.co.id website has met my expectations as a user.	KPQ2
	I am likely to revisit and use the lapisbogor.co.id website in the future.	KPQ3

The quantitative approach was chosen as the primary method for data analysis in this study. The analysis process involves processing numerical data obtained from the questionnaires and transforming it into information that can answer the research objectives. The analysis is conducted systematically with the assistance of Statistical Product and Service Solutions (SPSS), a software widely recognized for its reliability in handling survey data. The researcher ensures that each questionnaire item accurately measures the intended concept or variable. For this purpose, a validity test is conducted by analyzing the correlation between each question's score and the total score of its dimension. A question is considered valid if its significance value is less than 0.05.
Next, a reliability test is performed to assess the consistency of the research instrument or questionnaire. This test uses Cronbach's Alpha, where a value of Cronbach's Alpha ≥ 0.6 or 0.7 generally indicates that the instrument is reliable and trustworthy.
Before conducting regression analysis, this study also performs classical assumption tests to ensure that the analysis results are valid and unbiased. These classical assumption tests include the normality test to verify that the data are normally distributed, the multicollinearity test to detect correlations among independent variables, the heteroscedasticity test to examine the equality of residual variances across predicted values, and the linearity test to ensure that the relationship between independent and dependent variables is linear.
The multiple linear regression analysis represents the core of the inferential analysis in this study. The researcher examines how the independent variables (the WebQual 4.0 dimensions: Usability, Information Quality, and Service Interaction Quality) influence the dependent variable (User Satisfaction), both collectively and individually. The analysis includes three main components: the F-test (simultaneous test), which measures whether all WebQual dimensions together have a significant simultaneous effect on user satisfaction; the t-test (partial test), which measures whether each WebQual dimension individually has a significant effect on user satisfaction; and the coefficient of determination (R^2), which indicates the proportion of variation in user satisfaction that can be explained by the model formed from the WebQual dimensions. Through this comprehensive analysis, raw data from user perceptions of the lapisbogor.co.id website will be processed and interpreted into meaningful information, providing a clear picture of user satisfaction levels and the key website quality factors that most strongly influence it.

3. Result and Discussion

Lapisbogor.co.id is the official website of Lapis Bogor Sangkuriang, a legendary layered cake brand from Bogor that has been established since 1975. This website serves as a digital platform to promote products, accept online orders, and facilitate communication with customers.

3.1. Results of Demographic Analysis

Referring to the pie chart of gender shown in Figure IV.1, the respondents were dominated by male, totaling 95 people (63%), while female respondents numbered 55 people (37%).

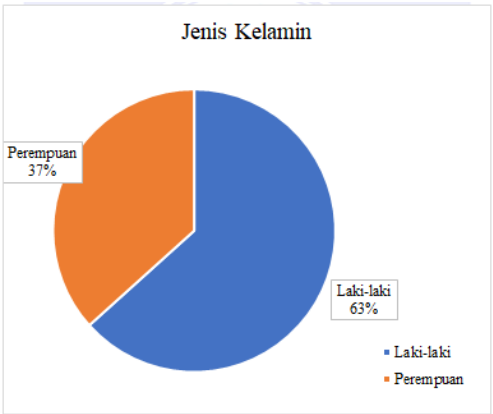

Figure 2: Results of The Gender Questionnaire

As shown in Figure IV.2, the respondents' age distribution in this study is as follows: under 19 years old, 4 people (3%); 19–25 years old, 64 people (42%); 26–35 years old, 57 people (38%); 36–45 years old, 22 people (15%); and over 45 years old, 3 people (2%).

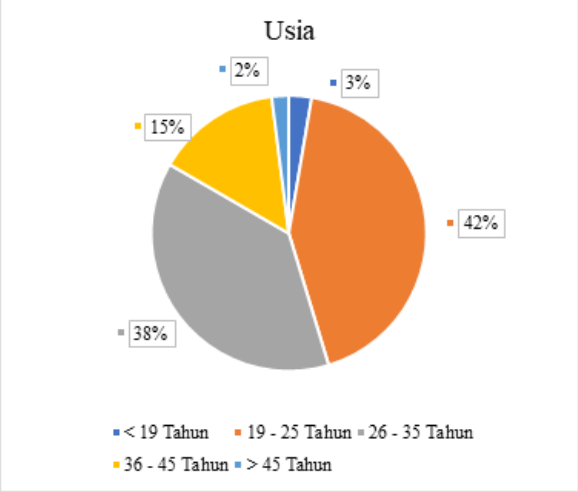

Figure 3: Age Questionnaire Results

Based on the collected data, respondents visit the lapisbogor.co.id website with the following frequency: Very Rarely (less than once a month) 24 people (16%), Rarely (1–2 times a month) 24 people (16%), Quite Often (3–4 times a month) 49 people (33%), Often (more than 4 times a month) 41 people (27%), and Very Often (almost every day) 12 people (8%).

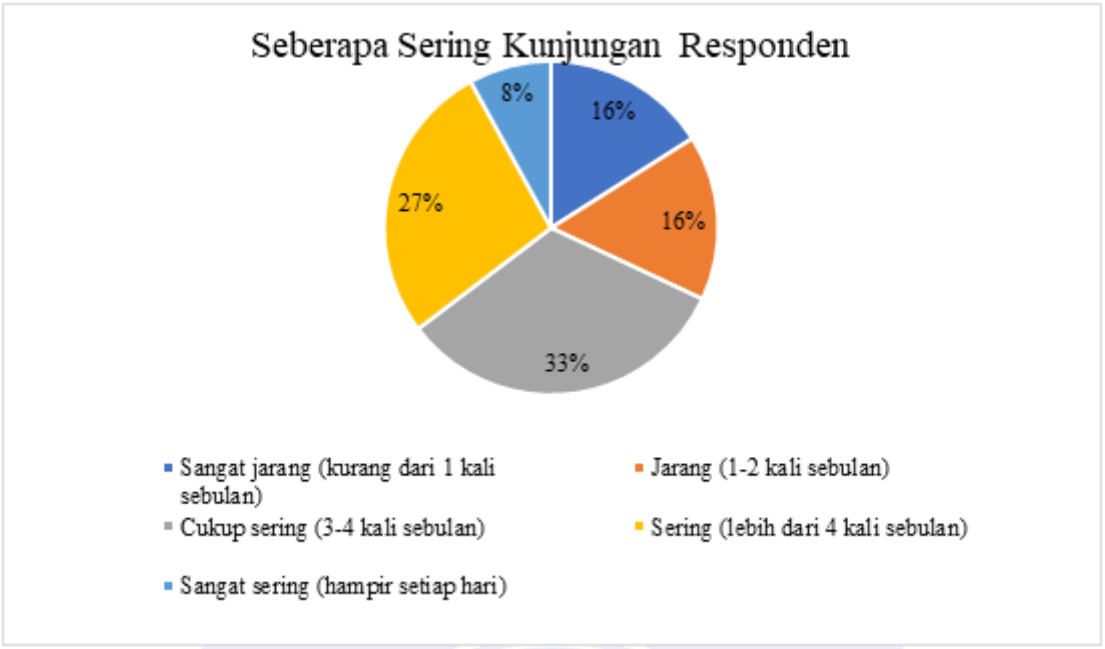

Figure 4: Questionnaire Results On How Often Respondents Visit

3.2. Test Result

1. Uji Validitas
   The validity of this study was tested using the Pearson Product-Moment Correlation. The test was conducted by comparing the score of each questionnaire item with the total score of its respective variable: Usability (UQ), Information Quality (IQQ), Service Interaction Quality (SIQQ), and User Satisfaction (KPQ). The validity criteria were established by comparing the calculated r (r_o) with the r-table (r_t). An instrument is considered valid if $r_o > r_t$. With a sample size of 150, the degrees of freedom (df) used were 148 (150–2), and at a significance level (α) of 5%, the r-table value was 0.159.

Table 3: Multiple Linear Regression Model Testing Criteria

Criteria	Explanation
Instrument Evaluation	
Validity	The calculated r (r_o) must be greater than the r-table (r_t). With N = 150 and a significance level of 5%, the r_t value is 0.159.
Reliability	Cronbach's Alpha must exceed the reliability standard, generally ≥ 0.60 or 0.70.
Multiple Linear Regression Model Evaluation	

Classical Assumption: Normality	Normal Probability Plots (P.Plot): plotted points should lie close to or follow the diagonal line. Kolmogorov-Smirnov: significance value should be greater than 0.05.
Classical Assumption: Multicollinearity	Tolerance value > 0.10 and VIF < 10.
Classical Assumption: Heteroscedasticity	Scatterplot: points should not form a clear pattern and should spread above and below or around 0. Park test: significance value > 0.05.
Hypothesis Evaluation	
Multiple Linear Regression Model Analysis	Positive relationship: regression coefficient (b) of the independent variable is positive. Negative relationship: regression coefficient (b) of the independent variable is negative.
Coefficient of Determination (R^2)	Adjusted R^2 values of 0.75, 0.50, and 0.25 indicate "strong," "moderate," and "weak" model categories, respectively.
F-test	Significance value < 0.05 indicates a significant simultaneous effect.
t-test	Calculated t-value > t-table for a one-tailed test with N = 150 and α = 5%.

The validity analysis, as presented in Table 4 confirms that all indicators measuring Usability (UQ), Information Quality (IQQ), Service Interaction Quality (SIQQ), and User Satisfaction (KPQ) are valid. This is supported by the fact that the calculated r-values for each indicator consistently exceed 0.159, confirming that these indicators are reliable for measuring the intended variables.

Table 4: Usability Validity Test (UEQ) Results

Indicator	r_o (Calculated r)	r_t (r-table)	Description
UQ1	0.816	0.159	Valid
UQ2	0.823	0.159	Valid
UQ3	0.809	0.159	Valid
UQ4	0.884	0.159	Valid
UQ5	0.826	0.159	Valid
IQQ1	0.924	0.159	Valid
IQQ2	0.925	0.159	Valid
IQQ3	0.920	0.159	Valid
IQQ4	0.939	0.159	Valid
SIQQ1	0.261	0.159	Valid
SIQQ2	0.730	0.159	Valid
SIQQ3	0.807	0.159	Valid
SIQQ4	0.745	0.159	Valid
KPQ1	0.925	0.159	Valid
KPQ2	0.937	0.159	Valid
KPQ3	0.953	0.159	Valid

The study conducted a reliability test using Cronbach's Alpha. This method calculates the reliability value by comparing the variance of each questionnaire item with the total variance of the scores for the measured variable. The test was carried out for each variable: Usability (UQ), Information Quality (IQQ), Service Interaction Quality (SIQQ), and User Satisfaction (KPQ). A questionnaire is considered reliable if the resulting Cronbach's Alpha value exceeds the standard reliability threshold of 0.60

Table 5: Cronbach's Alpha Reliability Test Results (UEQ, IQOO, SEQ, and KPK)

Variable	Number of Indicators	Cronbach's Alpha	Reliability Standard	Description
UQ	5	0.888	0.60	Reliable
IQQ	4	0.945	0.60	Reliable
SIQQ	3	0.756	0.60	Reliable
KPQ	3	0.932	0.60	Reliable

Table 3.4. Service Interaction Quality (SIQQ) Reliability Test Results

Variable	Number of Indicators	Cronbach's Alpha	Reliability Standard	Description
SIQQ	4	0.523	0.60	Not Reliable

Referring to Table 3.3, the results of the reliability test for the variables Usability (UQ), Information Quality (IQQ), Service Interaction Quality (SIQQ), and User Satisfaction (KPQ) indicate that all research variables have Cronbach's Alpha > 0.60. This shows that the respondents' answers to the questionnaire items for each variable are consistent and reliable.

However, Table 3.4 presents the results of a reliability test that did not meet the criteria, as the Cronbach's Alpha value for the dimension was 0.523, which is below the standard of 0.60. This indicates that the dimension was initially not internally reliable or consistent. To address this, problematic items were identified. The analysis revealed that SIQQ1 was a problematic item because its "Cronbach's Alpha if Item Deleted" value was extremely high (0.98). This high value suggests that SIQQ1 was inconsistent with the other items within the same dimension and, in fact, reduced the overall Cronbach's Alpha of the dimension.

2. Normality Testing
   in this study was conducted using the Kolmogorov-Smirnov (K-S) test on the unstandardized residuals from the regression model. The decision criteria are as follows: if the significance value > 0.05, the residuals are normally distributed; if ≤ 0.05, they are not.

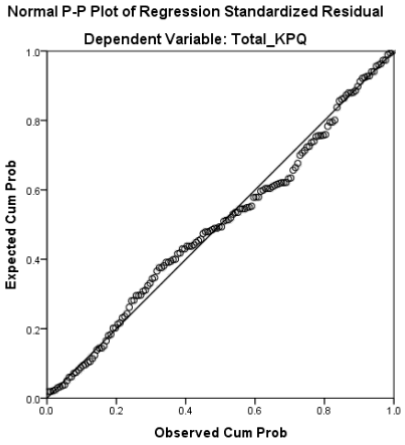

Figure 5: Normality Test Results with Normal Probability Plots

The Kolmogorov-Smirnov test results for the regression residuals are presented in Table 6. and Figure 5. Visually, the data points (residuals) closely follow the diagonal line in the normal probability plot, indicating a normal distribution. Consistently, the K-S test shows a significance value of 0.061, which is greater than 0.05. Therefore, it can be concluded that the regression residuals are normally distributed, meaning the normality
assumption for regression analysis has been met.

Table 6: Kolmogorov-Smirnov Normality Test

Kolmogorov-Smirnov Significance	Standard Significance	Description
0.061	0.05	Normal

3. Multicollinearity Test
   Multicollinearity was tested by analyzing the Tolerance and Variance Inflation Factor (VIF) values of each independent variable. As shown in Table 7, the Tolerance values for Usability (Total_UQ), Information Quality (Total_IQQ), and Service Interaction Quality (Total_SIQQ) are 0.792, 0.611, and 0.717, respectively, all above the threshold of 0.10. The VIF values for these variables are 1.262, 1.636, and 1.396, all below 10. This indicates that no multicollinearity exists, and model estimates are efficient and unbiased.

Table 7: Multicollinearity Test Results with Tolerance and VIF

Independent Variable	Tolerance	Standard Tolerance	VIF	Standard VIF	Description
Total_UQ	0.792	0.10	1.262	10	No Multicollinearity
Total_IQQ	0.611	0.10	1.636	10	No Multicollinearity
Total_SIQQ	0.717	0.10	1.396	10	No Multicollinearity

4. Heteroscedasticity Test
   Heteroscedasticity was assessed using a scatterplot of Standardized Residuals (ZRESID) against Standardized Predicted Values (ZPRED). The data points are randomly scattered above and below zero without forming a pattern, indicating no heteroscedasticity, and the assumption is met.

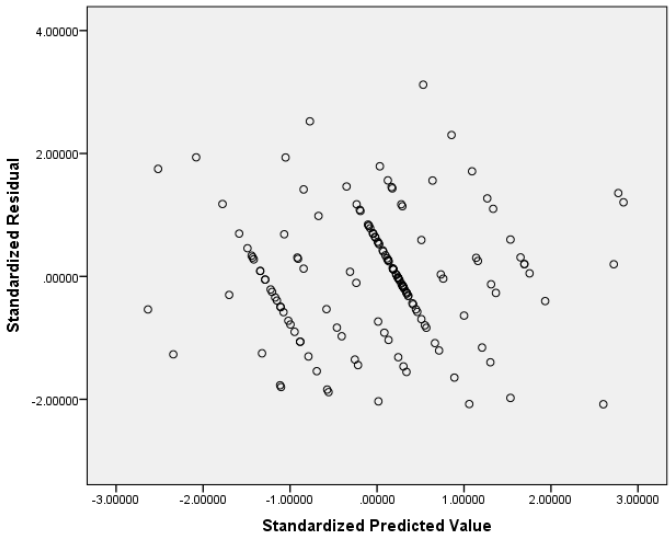

Figure 6: Heteroscedasticity Test Results with Scatterplot

5. Linearity Test

Linearity was tested to ensure a linear relationship between independent and dependent variables. Using the "Deviation from Linearity" significance value, variables with Sig. > 0.05 are considered linear. Results (Table 8) show:

Table 8: Linearity Test Results

Variable	Sig. Linearity	Sig. Deviation from Linearity	Description
Total_UQ	0.000	0.175	Linear
Total_IQQ	0.000	0.027	Non-Linear
Total_SIQQ	0.000	0.052	Linear

6. Multiple Linear Regression Analysis
   a) Coefficient of Determination (R^2)

Table 9: Coefficient of Determination (R^2)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.930[a]	.865	.863	.77601	2.213

a. Predictors: (Constant), Total_SIQQ, Total_UQ, Total_IQQ

b. Dependent Variable: Total_KPQ

Based on Figure 3.7, the interpretation is as follows:

1. The Multiple Correlation Coefficient (R) is 0.930. This indicates a very strong and positive linear relationship between Usability, Information Quality, and Service Interaction Quality collectively with User Satisfaction. The closer the value is to 1, the stronger the correlation.
2. The Coefficient of Determination (R Square) is 0.865. This means that approximately 86.5% of the total variation in User Satisfaction (Total_KPQ) can be explained or predicted by the combination of Usability (Total_UQ), Information Quality (Total_IQQ), and Service Interaction Quality (Total_SIQQ). The remaining 13.5% of variation is explained by other factors not included in this research model.
3. The Adjusted R Square is 0.863, indicating a more accurate predictive capability of the model after accounting for the number of predictors and sample size. This value is very close to R Square, confirming the efficiency of the variables included in the model.
4. The Durbin-Watson statistic is 2.213, which falls within the ideal range of 1.5 to 2.5. This indicates no autocorrelation problem among the residuals in the regression model, so the non-autocorrelation assumption is satisfied.

   b) Simultaneous Significance Test (F-test)

Table 10: Simultaneous Significance Test (F-test)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	565.253	3	188.418	312.885	.000[b]
	Residual	87.920	146	.602		
	Total	653.173	149			

a. Dependent Variable: Total_KPQ

b. Predictors: (Constant), Total_SIQQ, Total_UQ, Total_IQQ

Based on Table 10, the F-value is 312.885 with a significance level of 0.000 (<0.05), so H0 is rejected and H1 is accepted. This indicates that Usability, Information Quality, and Service Interaction Quality simultaneously have a significant effect on User Satisfaction, showing that the regression model is valid and has good predictive capability.

c) Regression Equation and Partial Significance Test (t-test)

Table 11: Regression Equation and Partial Significance Test (t-test)

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-1.776	.611		-2.907	.004		
	Total_UQ	.109	.025	.147	4.295	.000	.792	1.262
	Total_IQQ	.520	.026	.773	19.897	.000	.611	1.636
	Total_SIQQ	.225	.046	.176	4.907	.000	.717	1.396

a. Dependent Variable: Total_KPQ

Total_KPQ = −1.776 + 0.109 (Total_UQ) + 0.520 (Total_IQQ) + 0.225 (Total_SIQQ) + e

Summary of interpretation:

1) Constant (-1.776): If all independent variables are zero, the predicted user satisfaction is -1.776.
2) Usability (Total_UQ): Coefficient B = 0.109, Beta = 0.147, significant ($p < 0.05$). Each 1-unit increase in Usability raises user satisfaction by 0.109 units.
3) Information Quality (Total_IQQ): Coefficient B = 0.520, Beta = 0.773, significant ($p < 0.05$). This is the most dominant variable; each 1-unit increase raises user satisfaction by 0.520 units.
4) Service Interaction Quality (Total_SIQQ): Coefficient B = 0.225, Beta = 0.176, significant ($p < 0.05$). Each 1-unit increase raises user satisfaction by 0.225 units.

Conclusion: All three independent variables—Usability, Information Quality, and Service Interaction Quality—have a positive and significant individual effect on user satisfaction.

3.3. Hypothesis Testing

Table 11: Hypothesis Testing

No	Independent Variable	Regression Coefficient (B)	Sig.	Test Result	Conclusion
1	**Usability (Total_UQ)**	0.109	0.000	t-calculated > t-table / Sig. < 0.05	Has a positive and significant effect on User Satisfaction
2	**Information Quality (Total_IQQ)**	0.520	0.000	t-calculated > t-table / Sig. < 0.05	Has a positive and significant effect on User Satisfaction
3	**Service Interaction Quality (Total_SIQQ)**	0.225	0.000	t-calculated > t-table / Sig. < 0.05	Has a positive and significant effect on User Satisfaction
4	**Simultaneous (Usability, Information Quality, Service Interaction Quality)**	–	0.000	F-calculated > F-table / Sig. < 0.05	All variables simultaneously have a significant effect on User Satisfaction

The simultaneous (F-test) results indicate that Usability (Total_UQ), Information Quality (Total_IQQ), and Service Interaction Quality (Total_SIQQ) collectively have a significant positive effect on User Satisfaction (Total_KPQ). Individually (t-test), each variable also demonstrates a significant positive influence: Usability contributes positively with a coefficient of 0.109 (Sig. = 0.000), Information Quality has the strongest impact with a coefficient of 0.520 (Sig. = 0.000), and Service Interaction Quality contributes positively with a coefficient of 0.225 (Sig. = 0.000). These findings confirm that both individually and collectively, all three independent variables significantly enhance the satisfaction of users of the lapisbogor.co.id website.

3.4. Discussion of Hypotheses

1. Simultaneous Effect of Independent Variables on User Satisfaction

The F-test results indicate that Usability, Information Quality, and Service Interaction Quality simultaneously have a highly significant effect on User Satisfaction for the lapisbogor.co.id website (Sig. = 0.000 < 0.05). The regression model explains

86.3% of the variation in user satisfaction (Adjusted $R^2 = 0.863$), confirming that the overall quality of the system and services collectively serves as a strong predictor of user satisfaction.

2. Partial Effect of Independent Variables on User Satisfaction
    a) **Usability (H1)**: Has a positive and significant effect on user satisfaction (B = 0.109; Sig. = 0.000). Higher website usability corresponds to higher user satisfaction, consistent with the Technology Acceptance Model (TAM) emphasizing perceived usefulness and ease of use.
    b) **Information Quality (H2)**: Exhibits a positive and significant effect (B = 0.520; Sig. = 0.000) with the highest standardized Beta (0.773), making it the most dominant factor. Accurate, relevant, complete, and timely information is crucial for user satisfaction. Although there is a slight deviation from linearity, the linear component remains dominant.
    c) **Service Interaction Quality (H3)**: Positively and significantly affects user satisfaction (B = 0.225; Sig. = 0.000). Better interaction and service support lead to higher user satisfaction, highlighting the importance of service quality in the overall digital user experience, consistent with the DeLone & McLean model.

4. Conclusion

Based on a comprehensive analysis of research data evaluating the quality of the Lapisbogor.co.id website using the WebQual 4.0 method and its impact on User Satisfaction, several key points can be concluded:

1. Collectively, the website quality dimensions—Usability, Information Quality, and Service Interaction Quality—have a positive and significant effect on User Satisfaction. This is supported by the F-test with a significance value of 0.000 (< 0.05). The model's ability to explain variations in User Satisfaction reaches 86.5%, demonstrating the relevance and validity of the constructed regression model.
2. Individual (partial) testing shows that Usability of the Lapisbogor.co.id website contributes positively and significantly to User Satisfaction. The t-test significance value of 0.000 (< 0.05) confirms that the better the website's usability, the higher the satisfaction experienced by users.
3. Similarly, Information Quality on the Lapisbogor.co.id website exhibits a positive and significant partial effect on User Satisfaction. With a significance value of 0.000 (< 0.05), Information Quality is the most dominant factor influencing satisfaction, with a standardized Beta value of 0.773. This emphasizes the crucial importance of accuracy, relevance, completeness, and timeliness of information for user satisfaction.
4. Finally, Service Interaction Quality of the website also has a positive and significant partial effect on User Satisfaction. With a t-test significance value of 0.000 (< 0.05), the quality of interaction and service support is proven to significantly enhance user satisfaction.

References

[1] A. Morales-Vargas, R. Pedraza-Jiménez, and L. Codina, "Website quality: An analysis of scientific production," *Prof. la Inf.*, vol. 29, no. 5, pp. 1–21, 2020, doi: 10.3145/epi.2020.sep.08.

[2] M. Fadlan, I. T. Saputra, and S. Suprianto, "Pengukuran Usability Level Website E-Learning Pada Perguruan Tinggi Di Kalimantan Utara," *Sebatik*, vol. 26, no. 2, pp. 732–738, 2022, doi: 10.46984/sebatik.v26i2.2058.

[3] N. M. Rizki Abdul Razab, "ANALISIS KUALITAS WEBSITE DIGITALIN.CO.ID MENGGUNAKAN WEBQUAL 4.0, USER EXPERIENCE QUESTIONNAIRE (UEQ) DAN MCCALL," *New Phytol.*, vol. 51, no. 1, p. 2022, 2022, [Online]. Available: https://doi.org/10.20935/AL189%0Ahttps://www.researchgate.net/publication/269107473_What_is_governance/link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf.edu/~reynal/Civil wars_12December2010.pdf%0Ahttps://think-asia.org/handle/11540/8282%0Ahttps:

[4] D. A. Husaeni and N. Mardiana, "Analisis Kualitas Website Terhadap Kepuasan Pengguna Menggunakan Webqual 4.0 Dan Pls-Sem," *Techno-Socio Ekon.*, vol. 15, no. 2, pp. 77–86, 2022, doi: 10.32897/techno.2022.15.2.1312.

[5] R. Sibarani, "ANALISIS KUALITAS WEBSITE UNIVERSITAS SATYA NEGARA INDONESIA MENGGUNAKAN MODEL WEBQUAL 4.0," vol. 4, no. 1, pp. 9–15, 2024.

[6] S. Fhelly Djun and K. Toni Harjo, "Evaluasi kualitas website kampus universitas teknologi indonesia di denpasar menggunakan metode webqual 4.0 modifikasi dan importance performance analysis (IPA)," *JPTM J. Penelit. Terap. Mhs.*, vol. 2, pp. 2987–8837, 2024.

[7] M. Ilham and W. Cholil, "Evaluasi Kualitas Website Kedinasan di Lingkup Perangkat Daerah Menggunakan Metode Webqual 4.0 dan Standar Website Pemerintah Kabupaten Musi Banyuasin," *J. Teknol. Inform. dan Komput.*, vol. 9, no. 2, pp. 1104–1117, 2023, doi: 10.37012/jtik.v9i2.1626.

[8] M. A. Athallah and K. Kraugusteeliana, "Analisis Kualitas Website," *Keunis*, vol. 10, no. 2, p. 29, 2022.

[9] F. A. Artanto, H. H. Kusumawardani, A. Sukani, H. T. Buwono, and J. Pagenstu, "Remik: Riset dan E-Jurnal Manajemen Informatika Komputer Analisis Kualitas Website Prodi Informatika Universitas Muhammadiyah Pekajangan Pekalongan dengan Metode Webqual 4.0," *Remik Ris. dan E-Jurnal Manaj. Inform. Komput.*, vol. 6, no. 2, pp. 216–224, 2022, [Online]. Available: http://doi.org/10.33395/remik.v6i2.11493

[10] T. A. Setiawan, A. Ilyas, and S. W. Binabar, "Penerapan Webqual 4.0 Untuk Analisis Kualitas Web Sistem Informasi Geografis Sebaran Narkoba Di Wilayah Polres Pekalongan …," *IC-Tech*, vol. XVI, no. 1, pp. 8–11, 2021, [Online]. Available: https://ejournal.stmik-wp.ac.id/index.php/ictech/article/view/145%0Ahttps://ejournal.stmik-wp.ac.id/index.php/ictech/article/download/145/106