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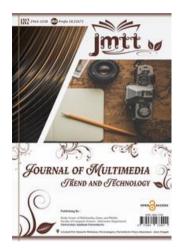
# Analysis of the Quality of the "Nu-Jek" Website on User Satisfaction Using the Webqual 4.0 Model

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#### **ARTICLE INFO**

#### **ABSTRACT**



## **History:**

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#### **Keyword:**

Digital Transportation; User Satisfaction; Information Quality; Website Nu-Jek is one of the rapidly growing e-commerce in the online buying and selling market. One of the mobile-based Marketplaces officially entered Indonesia in 2019. Nu-Jek has quite complete features, it can even book buses and hotel reservations. However, there are reports of problems with the missing chat feature, which can affect the quality of interaction. Then about the redesign of the UX and chat features for Nujek noted several usability issues on the main page of the application and the booking section. The study also proposed a new design to fix this problem. The purpose of this study is to analyze the quality of the Nu-Jek website using the Webqual 4.0 method with the variables usability, information quality, service interaction and their effect on user satisfaction both partially and simultaneously. The method used to analyze website quality is the WebQual 4.0 method. The results obtained in this study partially usability has a significant effect on user satisfaction. Information quality partially has a significant effect on user satisfaction. Then partially service interaction has a significant effect on user satisfaction. Simultaneously the variables usability, information quality, service interaction have a significant effect on user satisfaction.

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#### **INTRODUCTION**

The development of information and communication technology has significantly changed the landscape of transportation and on-demand services in Indonesia. The presence of online motorcycle taxi platforms such as Nusantara Ojek (NUJEK) provides alternative mobility and easy access to various services for the community. As a technology company, NUJEK's success is highly dependent on the quality of its digital platform, especially the website and mobile application, as the main point of interaction with users and service providers. Website as one of the digital representations of the company plays a crucial role in providing information, building trust, and facilitating initial interactions with potential users and partners [1]. Good website quality, in terms of usability, information quality, and service interaction quality, is a determining factor in attracting and retaining users amidst the tight competition in this industry [2].

Website quality evaluation is important to identify areas for improvement to increase user satisfaction, operational efficiency, and platform competitiveness [3]. One common method used to evaluate website quality from the end-user perspective is the WebQual (Web Quality) model [4]. This model measures user perceptions of three main dimensions of website quality: usability, information quality, and service interaction quality [5]. Based on previous information searches, there are several indications of potential issues related to the quality of the NUJEK digital platform. User reviews noted issues with the in-app chat feature, which could impact the quality of service interactions [6]. Additionally, a study of the redesign of the user interface (UX) and chat feature on the NUJEK app identified several usability issues on the homepage and booking process. This information indicates room for improvement in terms of ease of use and platform functionality.

Furthermore, although NUJEK offers various services integrated in one platform, the quality of information related to these services, the availability of accurate and relevant information, and the ease of users in accessing the information through the website are important aspects to evaluate. The quality of service interactions, including website responsiveness, ease of navigation, and user support, also contribute significantly to the overall user experience [7]. Therefore, an in-depth evaluation of the quality of the NUJEK website using the WebQual model is relevant to understand user perceptions of usability, information quality, and quality of service interactions offered. The results of this evaluation are expected to provide valuable insights for NUJEK in identifying the strengths and weaknesses of their website, as well as formulating targeted improvement strategies to increase user satisfaction, strengthen brand image, and win the competition in the dynamic online motorcycle taxi and ondemand service market.

Nusantara Ojek (NUJEK) is a technology company that develops an application platform for transportation services and various other on-demand services. Although often associated with Nahdlatul Ulama (NU) because it was initiated by four NU members, NU-IEK formally operates as PT Tekno Karya Nusa. It is important to emphasize that NU-JEK itself is not a transportation or courier company. They provide the application as a means to connect users with independent service providers (drivers and other service providers). Several user reviews indicate that the NU-JEK application has quite complete features, even being able to book buses and hotel reservations. However, there have been reports of problems with the missing chat feature, which can affect the quality of interactions [8]. A study on the UX redesign and chat feature for Nujek noted several usability issues on the application's homepage and booking section [9]. The study also proposed a new design to fix these issues. A news article from 2018 stated that NU-JEK was launched with superior features that were not available in other online motorcycle taxi applications. However, there are also Nu-lek user experiences that give a positive impression, such as in terms of usability or usability, the Nu-Jek website is easy to use, you can buy goods easily, free shipping costs, and there are attractive discounts offered by Nu-Jek. However, there are also Nu-Jek user experiences that give a positive impression, such as in terms of usability or usability, the Shopee application is easy to use, you can buy goods easily, free shipping costs, and there are attractive discounts offered by Nu-Jek.

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Because of the importance of the role of the Nu-Jek website system for user satisfaction, an analysis is needed to determine the level of quality of the Nu-Jek website from the perspective of website users. This study was conducted to analyze the quality of the website using the Webqual 4.0 method and its effect on user satisfaction both partially and simultaneously with Nu-Jek as the object of research. Data collection by distributing questionnaires to users who have transacted at Nu-Iek, the total respondents were 300 respondents. The data processing process used SPSS 25 for windows. Based on this, the author is interested in analyzing the quality of the website using the Webqual 4.0 method and its effect on Nu-Jek user satisfaction.

#### **METHOD**

### 1. Data Collecting

The research method used by the author is Literature Study and Questionnaire. The questionnaire was distributed to Nu-Jek users who had used or transacted at least once, using a Likert scale.

#### 2. Framework Model

In the framework of thought that was built, this study uses a previously popular model, namely the WebSqual model.

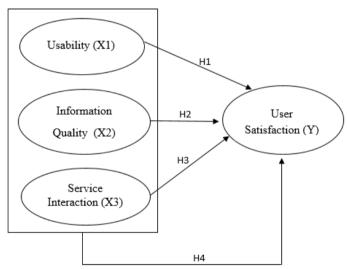


Figure 1. Webqual framework model

Researchers use the Webqual 4.0 method to assess the quality of Nu-Jek's website services [10]. The latest version is Webqual 4.0 which uses three measurement categories with 22 statements. The three categories are usability, information quality and service interaction. The usability category is based on a study of the relationship between humans and computers and a study of website usability, including ease of navigation, design suitability and the image presented to users [11]. The information quality category is studied based on a general study of information systems. This category relates to the quality of website content, namely the appropriateness of information for user purposes, for example regarding the accuracy, format and relevance of the information presented [12]. The service interaction category relates to the service interaction felt by users when deeply involved with the website. Webgual 4.0 statement indicators.

Vol. 4, No. 1, April 2025, ISSN 2964-1330

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Table 1.	Data o	uestionnaire	instrument	models and	concepts
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Bata questionnaire misti unient models and concepts			
Question			
Easy to operate the website			
The interaction between the website and the user is clear and easy to			
understand			
Feels easy to navigate the website			
The website is easy to use			
The appearance of the website is attractive			
The design is in accordance with the type of website			
The website contains competence			
The website creates a positive experience			
The website provides accurate information			
The website provides reliable information			
The website provides up-to-date information			
The website provides relevant information			
The website provides easy-to-understand information			
The website provides sufficiently detailed information			
The website provides information in a suitable format			
The website has a good reputation			
Users feel safe in making transactions			
Feel safe with users' personal data			
The website provides space for personalization			
Conveys a sense of community or socializing			
The website makes it easy to communicate with the organization			
Users are confident that goods / services will be delivered as			
promised			

## 3. Data Analysis

Quantitative descriptive is used by the author to show the reality or conditions that occur. The data is analyzed using statistical methods, namely multiple regression, so that a conclusion can be drawn. The data analysis tested is as follows:

## a. Validity Testing

The statement in the questionnaire in the validity test is said to be valid if the calculated r > r table at a significance value of 0.05 or 5%. Conversely, the statement in the questionnaire in the validity test is said to be invalid if the calculated r < r table at a significance value of 0.05 or 5%.

## b. Reability Testing

The questionnaire is said to be reliable if the Cronbach's Alpha value is greater than 0.6. The reliability test criteria with the alpha formula are if r count > r table, then the measuring instrument is reliable and vice versa, if r count < r table then the measuring instrument is not reliable. The interpretation criteria regarding the r11 index are as follows:

Table 2. Interpretation criteria regarding the r11 index

Tubic =: Interpretation error in regarding the fill inden			
Criteria			
Very strong			
Strong			
Enough			
Low			
Very Low			

#### Vol. 4, No. 1, April 2025, ISSN 2964-1330

https://journal.educollabs.org/index.php/jmtt/

#### c. Classical Assumption Test

The classical assumption test is used to test whether the regression line equation obtained is linear and can be used to perform the equation, so the classical assumption test must be carried out.

### d. Multiple Linear Regression Analysis

Analysis is carried out on one dependent variable and two or more independent variables. The following is the multiple linear regression formula (1):

$$\gamma = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e (1)$$

#### Description:

*Y* = Dependent Variable (Response)

a = Constant

*b* = Slope or Coefficient estimate

X = Independent Variable (Predictor)Uji Hipotesis

According to research on hypothesis testing, decisions made contain uncertainty, meaning that decisions can be right or wrong, thus creating risks. In multiple linear regression testing there are two types of hypothesis testing, namely the F Test (simultaneous test) and the T Test (partial test).

#### 1) Partial Test (T)

An independent variable is said to have a significant influence on the dependent variable if the significance probability value < 0.05 or the tcount value > ttable and vice versa if the significance probability value > 0.05 or the tcount value < ttable then an independent variable is said to not have a significant influence on the dependent variable.

## Simultaneous Test (F)

F test criteria if the Fcount value > Ftable or sig. value < 0.05 then the hypothesis is accepted and vice versa if Fcount < Ftable or sig. value > 0.05 then the hypothesis is rejected.

#### RESULT

#### 1. Validity Test

Validity ensures that the questions in the questionnaire truly reflect the concept or variable you want to study. For example, if you want to measure stress levels, your questions should focus on relevant indicators of stress, not on something else like happiness or job satisfaction (unless that is part of your research) [13]. Research that uses valid instruments has a higher potential for generalizability of results. This means that your research results are more likely to apply to a wider population because you are confident that you are measuring the same concept in all respondents [14]. Valid data contributes to the development of accurate theories and the implementation of effective practices. If research in psychology, for example, uses a valid questionnaire to measure a psychological construct, the results of the study can be more reliable for developing interventions or better understanding the construct.

Before conducting the analysis, a validity test was first conducted on the question components to confirm their use in data acquisition later. The following table 3 explains the results of the validity test obtained:

Table 3. Results of validity tests on questionnaire questions.

	Tubic b. Ites	ares or variarcy costs	on questionnune que	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
No	P-Value	R Score	R Table	Result
1.	P1	0,676	0,113	Valid
2.	P2	0,668	0,113	Valid
3.	Р3	0,725	0,113	Valid
4.	P4	0,720	0,113	Valid
5.	P5	0, 658	0,113	Valid
6.	P6	0,611	0,113	Valid
7.	P7	0,657	0,113	Valid

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8.	Р8	0,609	0,113	Valid
No	P-Value	R Score	R Table	Result
1.	P1	0,696	0,113	Valid
2.	P2	0,704	0,113	Valid
3.	Р3	0,668	0,113	Valid
4.	P4	0,742	0,113	Valid
5.	P5	0,724	0,113	Valid
6.	P6	0,757	0,113	Valid
7.	P7	0,755	0,113	Valid
No	P-Value	R Score	R Table	Result
1.	P1	0,631	0,113	Valid
2.	P2	0,725	0,113	Valid
3.	Р3	0,754	0,113	Valid
4.	P4	0,741	0,113	Valid
5.	P5	0,767	0,113	Valid
6.	P6	0,740	0,113	Valid
7.	P7	0,627	0,113	Valid
No	P-Value	R Score	R Table	Result
1.	P1	0,774	0,113	Valid
2.	P2	0,810	0,113	Valid
3.	Р3	0,831	0,113	Valid
4.	P4	0,819	0,113	Valid

A valid instrument will produce more accurate answers because respondents understand the questions according to the researcher's intent and the questions are relevant to the respondents' experience or knowledge related to the research topic [15]. From the statement in table 3, it is stated that for the question components used, all WebQual 4.0 statement indicators and user satisfaction indicators to analyze the quality of the Nu-Jek website are declared valid.

#### 2. Reability Test

Next is the instrument reliability test. The reliability test is used to explain whether the instrument components are considered reliable for use in data collection for further analysis purposes.

Table 4. Results of instrument component reliability testing.

Variabel	Alpha	Result
Usability (X1)	0,815	Reliabel
Information Quality (X2)	0,799	Reliabel
Service Interaction (X3)	0,631	Reliabel
User Satisfaction (Y)	0,782	Reliabel

A reliable instrument will produce consistent results over time or across respondents with similar characteristics. If the questionnaire is not reliable, respondents' answers may change for no apparent reason, making data interpretation difficult and inaccurate [16]. Reliable data builds trust in research results. If researchers and readers are confident that the instruments used produce stable and consistent data, then the conclusions drawn from the data will be more valid and accountable [17].

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Table 4 states that the reliability of the instrument used for the Webqual 4.0 research model and the user satisfaction indicators to analyze the quality of the Nu-Jek website have met the reliability criteria and are reliable and trustworthy measuring instruments.

### 3. Classical Assumption Test

a. Normality Testing

#### One-Sample Kolmogorov-Smirnov Test

		Unstandardiz ed Residual
N		97
Normal Parameters a,b	Mean	.0000000
	Std. Deviation	1.56797072
Most Extreme Differences	Absolute	.055
	Positive	.049
	Negative	055
Test Statistic		.055
Asymp. Sig. (2-tailed)		.200°,d

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of the true significance.

Figure 2. Results of the classical normality test using the Smirnov test

Based on the output results, it can be seen that the sig. value is 0.200 and is greater than 0.05. Thus, the data distribution can be said to be normal because the sig. value is greater than 0.05.

### 4. Multiple Linear Regression Analysis

		Coefficients <sup>a</sup>				
		Unstandardize	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.533	.813		.656	.513
	Usability	.143	.034	.230	4.235	.000
	Information QUality	.105	.038	.150	2.768	.006
	Service Interaction	.272	.035	.456	7.761	.000

Figure 3. Coefficient results in multiple regression analysis.

Based on the table above, the multiple linear regression equation can be determined, namely: Y = a(constant) + b1X1 + b2X2 + b3X3, it mean  $Y = 0.533 + 0.143X_1 + 0.105X_2 + 0.272X_3$ .

- 5. Hypotesis Testing
- a. Partial Test

		Coefficients <sup>a</sup>				
		Unstandardize	d Coefficients	Standardized Coefficients		
Model		В	Std. Error	Beta	t	Sig.
1	(Constant)	.533	.813		.656	.513
	Usability	.143	.034	.230	4.235	.000
	Information QUality	.105	.038	.150	2.768	.006
	Service Interaction	.272	.035	.456	7.761	.000

Figure 4. Coefficient results based on hypothesis testing.

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1) Partial Test of the influence of Usability on user satisfaction. The following is the hypothesis of the influence of Usability on user satisfaction:

H0: Usability has no significant effect on user satisfaction.

H1: Usability has a significant effect on user satisfaction.

Based on the output results, it is known that the calculated t value for the usability variable is 4.236 and the t table value in this study is 1.650 while the sig. t value is 0.000 and less than 0.05. Based on the two-way test value using a comparison of the calculated t value and the comparison of the sig. t value, H0 is rejected and H1 is accepted or in other words, in the partial test of the influence of the usability variable on user satisfaction, the results show that the usability variable has a significant influence on user satisfaction.

2) Partial Test of the influence of Information Quality on user satisfaction. The following is the hypothesis of the influence of Information Quality on user satisfaction:

*H0: Information Quality has no significant effect on user satisfaction.* 

H1: Information Quality has a significant effect on user satisfaction.

Based on the output results, it is known that the calculated t value for the Information Quality variable is 2.768 and the t table value in this study is 1.650 while the sig. t value is 0.006 and less than 0.05. Thus, the calculated t value is greater than the t table value, but the sig. t value is less than 0.05. Based on the two-way test value using a comparison of the calculated t value and the comparison of the sig. t value, H0 is rejected and H1 is accepted or in other words, in the partial test of the influence of the information quality variable on user satisfaction, the results show that the information quality variable has a significant influence on user satisfaction.

3) Partial Test of the influence of Service Interaction on user satisfaction. The following is the hypothesis of the influence of Service Interaction on user satisfaction:

H0: Service Interaction has no significant effect on user satisfaction.

H1: Service Interaction has a significant effect on user satisfaction.

Based on the output results, it is known that the calculated t value for the Service Interaction variable is 7.761 and the t table value in this study is 1.650 while the sig. t value is 0.000 and less than 0.05. Thus, the calculated t value is greater than the t table value and the sig. t value is less than 0.05. Based on the two-way test value using a comparison of the calculated t value and the comparison of the sig. t value, H0 is rejected and H1 is accepted or in other words, in the partial test of the influence of the service interaction variable on user satisfaction, the results show that the service interaction variable has a significant influence on user satisfaction.

#### b. F Test (Simultaneous Test)

	ANOVA <sup>a</sup>								
Mode	I	Sum of Squares	df	Mean Square	F	Sig.			
1	Regression	845.767	3	281.922	125.115	.000 <sup>b</sup>			
	Residual	666.980	296	2.253					
	Total	1512.747	299						
	a. Dependent Variable: User Satisfication b. Predictors: (Constant), Service Interaction, Usability, Information QUality								

Figure 5. F Test Results on Anova Statistics

Vol. 4, No. 1, April 2025, ISSN 2964-1330

https://journal.educollabs.org/index.php/jmtt/

Looking at Figure 5, based on the output results, the calculated F value is 125.115 and the Sig. F value is 0.000. In this study, the F table value is 2.635. Thus, the calculated F value of 125.115 is greater than the F table value of 2.635 and the Sig. F value is smaller than 0.05. On the basis of the calculated F which is greater than the F table and the Sig. value is smaller than 0.05, then H0 is rejected and H1 is accepted. Thus, the independent variables consisting of usability, information quality and service interaction simultaneously have a significant influence on user satisfaction.

#### CONCLUTIONS

Based on the results of the research and discussion that have been described in the previous chapter, the first conclusion can be drawn, namely the influence of user satisfaction on the Nu-Jek website is partially influenced by the service interaction variable. Website users feel satisfied if the service interaction provided is satisfactory, for the usability variable and the information quality variable, it can already influence user satisfaction because it is considered something that is natural to exist on a website. Second, simultaneously, the usability, information quality, and service interaction variables have a significant influence on the user satisfaction variable.

## Acknowlegdement

Not applicable.

#### **Author Contributions**

Analysis: R.S.F, Writer: R.S.F, Validation: R.S.F.

# **Declaration of Competing Interest**

The authors declare that they have no known competing financial interests or personalrelationships that could have appeared to influence the work reported in this paper.

#### REFERENCE

- E. Hasmin, N. Aini, S. Aisa, R. Ramanda, and others, "Evaluation of News's Website with [1] Webgual And Importance Performance Analysis," in 2021 3rd International Conference on Cybernetics and Intelligent System (ICORIS), 2021, pp. 1–7.
- A. A. Ihsan, U. Hidayati, and M. Mardinawati, "Analisis Kualitas Website Dengan Metode [2] Webqual 4.0 Dan Importance Performance Analysis," Keunis, vol. 10, no. 2, pp. 29-40, 2022.
- F. R. Fiena Rindani and S. P. Sulistyo Puspitodjati, "Integration of Webqual Method to [3] Importance Performance Analysis and Kano Model to Analyze System Quality of E-Government: Case Study LAPOR!," J. Sist. Inf. (Journal Inf. Syst., vol. 16, no. 2, pp. 1–17, 2020.
- [4] A. A. Syahidi, A. N. Asyikin, and S. Subandi, "Measuring user assessments and expectations: The use of webgual 4.0 method and importance-performance analysis (IPA) to evaluate the quality of school websites," J. Inf. Technol. Comput. Sci., vol. 4, no. 1, pp. 76-89, 2019.
- B. C. Shia, M. Chen, and A. D. Ramdansyah, "Measuring customer satisfaction toward [5] localization website by WebQual and importance performance analysis (case study on AliexPress Site in Indonesia)," Am. J. Ind. Bus. Manag., vol. 6, no. 2, pp. 117–128, 2016.
- I. Santiko and A. Hidayat, "User Experience (UX) on Search Semantic Modeling Using Iterative [6] Process Flow Method," J. Multimed. Trend Technol., vol. 1, no. 3, pp. 8-15, 2022.
- I. S. Utami, H. Setiadi, and others, "Analysis the effect of website quality on user satisfaction [7] with the WebQual 4.0 method and importance-performance analysis (IPA)(case study: SPMB

https://journal.educollabs.org/index.php/jmtt/

- Sebelas Maret University's Website)," in Journal of Physics: Conference Series, 2021, p. 12003.
- [8] A. B. Wijaya and I. Santiko, "Pemodelan dan Implementasi Desain Responsive Website Sebagai Standar Interface Pada Mobile," *Akrab Juara J. Ilmu-ilmu Sos.*, vol. 4, no. 1, pp. 234–241, 2019.
- [9] D. Napitupulu, "Analysis of factors affecting the website quality based on WebQual approach (study case: XYZ University)," *Int. J. Adv. Sci. Eng. Inf. Technol.*, vol. 7, no. 3, pp. 792–798, 2017.
- [10] J. F. Andry, K. Christianto, and F. R. Wilujeng, "Using Webqual 4.0 and importance performance analysis to evaluate e-commerce website," *J. Inf. Syst. Eng. Bus. Intell.*, vol. 5, no. 1, pp. 23–31, 2019.
- [11] M. L. Hamzah, R. F. Rahmadhani, and A. A. Purwati, "An Integration of Webqual 4.0, importance performance analysis and customer satisfaction index on E-Campus," *J. Syst. Manag. Sci.*, vol. 12, no. 3, pp. 25–50, 2022.
- [12] M. L. Jundillah, J. E. Suseno, and B. Surarso, "Evaluation of e-learning websites using the Webqual method and importance performance analysis," in *E3S Web of Conferences*, 2019, p. 24001.
- [13] I. Santiko and G. Andriana, "Assessing the Accuracy Level of University-Based Website-Based Search Engines Using F-Measure and Hellinger," *J. Inf. Syst. Informatics*, vol. 6, no. 2, pp. 689–700, 2024.
- [14] I. G. N. S. Wijaya, E. Triandini, E. T. G. Kabnani, and S. Arifin, "E-commerce website service quality and customer loyalty using WebQual 4.0 with importance performances analysis, and structural equation model: An empirical study in shopee," *Regist. J. Ilm. Teknol. Sist. Inf.*, vol. 7, no. 2, pp. 107–124, 2021.
- [15] N. A. Hidayah, A. Subiyakto, and F. Setyaningsih, "Combining webqual and importance performance analysis for assessing a government website," in *2019 7th International Conference on Cyber and IT Service Management (CITSM)*, 2019, pp. 1–6.
- [16] M. Mortati, S. Magistretti, C. Cautela, and C. Dell'Era, "Data in design: How big data and thick data inform design thinking projects," *Technovation*, vol. 122, p. 102688, 2023.
- [17] M. F. Santoso, "Implementation Of UI/UX Concepts And Techniques In Web Layout Design With Figma," *J. Teknol. Dan Sist. Inf. Bisnis*, vol. 6, no. 2, pp. 279–285, 2024.