

Quality Assessment of The Kerinci District Social Services Website Using The Webqual 4.0 Model

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Abstract. The Kerinci Regency Social Service is a local government agency tasked with administering social welfare programs and community assistance. Its official website serves as a central public information platform and a channel for interaction between citizens and the local government. However, in practice, this platform still faces several shortcomings, including incomplete or outdated information, inaccessible features, and the lack of an active public complaints service. Therefore, this study aims to assess the quality of the Kerinci Regency Social Service website using the WebQual 4.0 framework, which focuses on three main dimensions: usability, information quality, and interaction quality and their impact on user satisfaction. A quantitative research design was employed, with data collected through an online questionnaire distributed to active users of the Kerinci Regency Social Service website. User responses were analyzed using multiple linear regression with SPSS 26. This study found that usability (coefficient = 3.633) and interaction quality (coefficient = 2.365) have a significant positive influence on user satisfaction. In contrast, information quality (coefficient = -0.687) showed no significant effect. These results suggest that ease of navigation and the quality of service interactions play a greater role in shaping user satisfaction than the completeness of the information provided. Based on these insights, website administrators are advised to prioritize improving usability and user interaction features to enhance overall service quality.

Keywords: E-Government, rural digital service, usability, user satisfaction, Webqual 4.0

1. Introduction

The Kerinci Regency Social Services Agency constitutes a principal entity within the local government, mandated to deliver comprehensive social welfare programmes to the inhabitants of Kerinci Regency. In pursuit of its mandate to enhance the efficiency and accessibility of public service delivery, the agency has developed an official website, accessible via <https://dinsos.kerincikab.go.id>. This platform is designed to operate as a centralised repository of public information, providing access to organisational profiles, service standards, contact information, and mechanisms for lodging formal public complaints.

Notwithstanding its intended purpose, the website continues to exhibit several operational limitations. Deficiencies such as incomplete or outdated content, non-functional features including image galleries and online complaint submission forms and the absence of real-time communication tools collectively impede its capacity to serve as an effective conduit between the government and the public. These constraints underscore the necessity for a systematic quality assessment grounded in the perspectives and experiences of its users. Similar issues have been reported in other e-government settings where user experience is a crucial factor in determining public trust and the wider uptake of digital services. (Ilyas et al., 2022).

According to (Nursyamsyi & Imaniawan, 2021), a website can be defined as a digital environment that combines different textual, visual, audio, and audiovisual multimedia components that are accessible through the internet. These platforms function as strategic communication channels in the field of public administration, allowing for the quick distribution of information as well as the delivery of interactive public services (Titiani, 2020).

The Kerinci Social Service website was evaluated in this study using the WebQual 4.0 framework, which was created by Barnes and Vidgen. This framework, which is well known for emphasizing user-centered performance assessment, comprises four fundamental dimensions: usability, information quality, interaction quality, and user satisfaction. Applications in a variety of settings, such as e-government portals, educational platforms, and e-commerce systems, have proven its methodological robustness (FAQIH, 2020) (Maharani et al., 2022).

This study aims to produce a thorough and empirically supported assessment of the Kerinci Regency Social Services website by utilizing the WebQual 4.0 methodology. It is anticipated that the results will guide specific recommendations meant to strengthen interaction mechanisms, increase information accessibility and accuracy, and improve usability. The need for regular quality assessments and iterative system improvements is further supported by evidence from earlier research in the public and private sectors showing that website quality directly and quantifiably affects user satisfaction and engagement (Widyastuti & Utomo, 2025).

2. Literature Review

2.1 Review of Previous Studies

The WebQual 4.0 framework has been used in a significant amount of research to evaluate the quality of websites in a variety of industries. But as of yet, no research has explicitly looked into the caliber of web-based social services at the level of regional governments. Five representative studies that are pertinent to this research are outlined in the review that follows.

2.1.1 Study by Salamah

The State Polytechnic of Sriwijaya's LMS platform was assessed in the study "Evaluation of the Learning Management System Website of the Police Academy Using the WebQual 4.0 Method." The findings showed that while information quality had varying effects depending on the type and accuracy of the content offered, usability and interaction quality had a significant positive impact on user satisfaction. According to (Salamah et al., 2020) usability features like

system responsiveness and ease of navigation are essential for improving the overall online learning experience

2.1.2 Study by monita dan yadi

In “Website Quality Analysis on E-Learning User Satisfaction at Bina Darma University During the COVID-19 Pandemic Using the WebQual 4.0 Method”, the authors examined user satisfaction in an e-learning context during the pandemic. Their findings underscored the importance of interface simplicity and intuitive menu design, highlighting that these features significantly enhance students’ comfort and engagement in the digital learning process (Monita & Yadi, 2021).

2.1.3 Study by kurniawati

The research titled “*Analysis of the Effect of Website Quality on Customer Satisfaction of Mister Aladin Using WebQual 4.0*” focused on a commercial hotel booking platform. While the accuracy of information was valued, the study revealed that usability particularly streamlined booking procedures, fast loading speeds, and effective filtering options had a more pronounced effect on customer satisfaction than other dimensions (Kurniawati et al., 2018).

2.1.4 Study simanjuntak

This investigation, “The Use of WebQual 4.0 and Importance Performance Analysis (IPA) Method for Sriwijaya State Polytechnic International Office”, combined WebQual 4.0 with IPA to assess website quality for an international student audience. Although aesthetic considerations and page structure were primary foci, respondents also identified accessibility to essential information as a vital usability factor. Recommendations included enhancing navigation systems and maintaining visual consistency to improve user experience (Simanjuntak et al., 2022).

2.1.5 Study rerung dan ramdhan

In “Website Quality Measurement of Educational Government Agencies in Indonesia Using Modified WebQual 4.0”, the authors evaluated the LLDIKTI Region III Jakarta website. Usability scored highest (98.54%) among all dimensions, indicating strong user approval of its ease of use, rapid menu access, and content readability. These aspects were found to outweigh interaction and information quality in driving user satisfaction (Rerung & Ramadhan, 2024).

2.2 Comparison and Research Gap

While all five studies provide valuable insights into website quality assessment, each differs in context and scope from the present research. The first two studies conducted by (Rerung & Ramadhan, 2024) and (Monita & Yadi, 2021) were situated within educational environments, targeting student and faculty respondents. By contrast, the current study examines a government platform serving the general public, with a focus on direct citizen engagement in a regional setting

The third study, by (Kurniawati et al., 2018) addressed a commercial tourism-related service, inherently distinct from non-commercial public service contexts. Similarly, the fourth

study by (Simanjuntak et al., 2022). focused on a specialised user group international students whose interaction needs differ from those of residents engaging with a regional government website. Finally, the study by (Rerung & Ramadhan, 2024), while examining a government platform, was limited to a centralised educational agency and did not involve rural or regional public service environments.

This review reveals a clear research gap: there has been no comprehensive application of the WebQual 4.0 framework to a regional government social service website, particularly one evaluated from the perspective of local residents in a rural context.

2.3 Research Novelty

Based on the literature review and comparison, this study presents several clear aspects of novelty:

- 1 Research Object: Unlike prior studies, this investigation focuses on a regency-level social service website, thereby addressing an underexplored segment of public sector digital service delivery.
- 2 Respondents profile: The study targets the general public as the primary user base, offering perspectives grounded in the lived experiences of citizens interacting with a government platform.
- 3 Regional Context: Conducted in Kerinci Regency, the research accounts for geographic and infrastructural conditions that differ markedly from urban settings, providing insights into the challenges faced by rural populations in accessing e-government services.
- 4 Analytical Focus: Rather than limiting the scope to technical or aesthetic aspects, the study holistically evaluates usability, information quality, and interaction quality in relation to user satisfaction.

Through these contributions, the research seeks to advance academic understanding of e-government quality assessment while also delivering actionable recommendations for practitioners seeking to optimise public digital service platforms in similar contexts.

3. Method

This study used a descriptive quantitative approach to analyze the quality of the Kerinci Regency Social Service website based on the WebQual 4.0 model. This approach was chosen because it can illustrate the influence of the independent variables, namely usability (X1), information quality (X2), and interaction quality (X3), on the dependent variable, user satisfaction (Y). The study population was all 1,026 users of the Kerinci Regency Social Service website. The sample size was determined using the Slovin formula at a 10% margin of error, resulting in 100 respondents. The sampling technique used was simple random sampling, ensuring that each member of the population had an equal chance of being selected. The research instrument was a questionnaire with a five-point Likert scale (1 = strongly disagree, 5 = strongly agree), structured based on WebQual 4.0 indicators. The

usability variable (X1) encompasses indicators of ease of use, interface appearance, and website navigation. The information quality variable (X2) encompasses the accuracy, completeness, and clarity of information. The interaction quality variable (X3) assesses responsiveness, communication reliability, and the quality of service interactions. Meanwhile, the user satisfaction variable (Y) measures the overall level of user satisfaction with the website. The instrument was tested for validity and reliability before use. Validity testing was performed using Pearson correlation, where an item was declared valid if the calculated r value was greater than the table r (0.19 at a 5% significance level with $df = 98$). Reliability was tested using Cronbach's Alpha, and the instrument was declared reliable if $\alpha > 0.60$. Data analysis used IBM SPSS Statistics version 26. The first stage was classical assumption testing to ensure the feasibility of the regression model, including tests for normality (Kolmogorov–Smirnov), multicollinearity ($VIF < 10$), and heteroscedasticity (Glejser test). After meeting the assumptions, the analysis continued with multiple linear regression, a t -test to determine partial effects, an F -test to determine simultaneous effects, and a coefficient of determination (R^2) calculation to determine the model's ability to explain variations in user satisfaction.

4. Results and Discussion

4.1 Research Design

To support the development of this study, it is essential to establish a clear research framework that outlines each stage of the process. A research framework refers to a structured set of steps to be followed in addressing the problem under investigation, ensuring that the study's objectives are achieved effectively and systematically. The framework used in this study is presented in Figure 1:

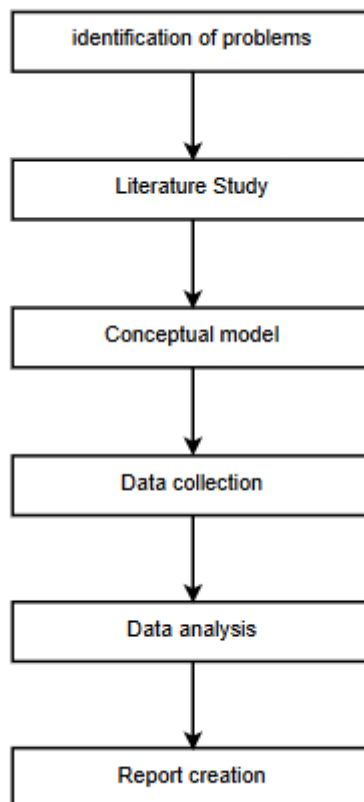


Figure 1 Study Framework

The stages or structure of this study are carried out to produce outcomes that are identified through conceptually defined factors, followed by the development of a study model that leads to accurate and reliable findings. Based on the research framework presented, each stage of the study can be described in detail as follows:

4.1.1 Identification of problems

The initial stage involved diagnosing the core issues affecting the Kerinci Regency Social Services website. This process included identifying root causes, formulating preliminary hypotheses, and narrowing the scope to address factors most relevant to service quality. Such precision in problem framing is essential to prevent analytical divergence and to maintain focus on variables with tangible impacts on user satisfaction.

4.1.2 Literature Study

A structured literature review was conducted to establish the conceptual foundation for the study. Academic books, peer-reviewed journal articles, e-books, and other reputable online resources were consulted, with a focus on frameworks, empirical findings, and methodological approaches relevant to WebQual 4.0 and e-government service quality. Sources were primarily obtained from scholarly

databases, including Google Scholar and indexed journal repositories, ensuring both credibility and currency.

4.1.3 Conceptual model

Drawing upon the literature review, the study developed a conceptual model that articulates the relationship between the independent variables usability, information quality, and interaction quality and the dependent variable, user satisfaction. This model reflects the WebQual 4.0 structure, situating user perceptions as the central determinant of website performance in public service contexts

4.1.4 Data collection

Data collection is the process of systematically measuring information about observed variables that enables one to answer study questions, test hypotheses, and evaluate results. The data collection methods used in this study are as follows.

1. Observation Method

Direct observation was conducted to document both functional and non-functional elements of the website. This included identifying technical barriers, accessibility issues, and inconsistencies in content delivery. Observational insights also informed the refinement of the questionnaire design.

2. Questionnaire method

A structured online questionnaire was disseminated to residents of Kerinci Regency who had previously accessed the Social Services website. The instrument contained items aligned with the WebQual 4.0 dimensions, measured using a Likert scale. Respondents were selected using purposive sampling to ensure that only active or past users of the website were included, thereby enhancing the relevance of the data collected.

4.1.5 Data Analysis

Data analysis was conducted using IBM SPSS Statistics version 26. Both descriptive and inferential statistical techniques were employed to evaluate the hypothesised relationships. Specifically:

1. Validity Testing: Item validity was assessed using Pearson's correlation coefficient, with r-values above 0.30 considered acceptable.
2. Reliability Testing : Internal consistency was evaluated via Cronbach's Alpha, with values exceeding 0.60 deemed satisfactory.
3. Classical Assumption Tests: Normality, multicollinearity, and heteroscedasticity tests were performed to confirm that the data met the assumptions required for regression analysis.
4. Multiple Linear Regression : Regression modelling was applied to determine

the magnitude and direction of the effects of each independent variable on user satisfaction.

4.1.6 Report Creation

The final phase involved compiling the findings into a structured research report. The document followed standard academic conventions, encompassing chapters on the background, literature review, methodology, results, discussion, and conclusions. Recommendations for website improvement were grounded in both statistical evidence and theoretical insights from the WebQual 4.0 framework.

4.2 Respondent Profile

The primary data for this study were obtained through an online questionnaire distributed to residents of Kerinci Regency who had previously accessed the official website of the Social Services Office. Respondents represented diverse demographic backgrounds in terms of gender, age, and occupational status. The majority were active internet users with prior experience navigating the website, thereby ensuring that their responses were grounded in direct interaction with the platform. A total of 120 individuals completed the questionnaire, but only 100 were included in the final analysis as they had verified experience accessing the website.

Tabel 1 Respondent Profile

Gender	Frequency(n)	Percentage (%)
Male	71	59,2
Female	49	40,8
Total	120	100

Table 1 Show The majority of respondents were male, totaling 71 individuals (59.2%), while 49 respondents (40.8%) were female. This indicates that male users were more dominant in accessing the Kerinci Regency Social Services website.

4.3 Validity and Reliability Test Results

Validity testing was applied to all items measuring the variables of Usability (X1), Information Quality (X2), Interaction Quality (X3), and User Satisfaction (Y). Pearson's correlation results indicated that all items exceeded the minimum r-value threshold of 0.30, confirming their validity. Reliability testing conducted using Cronbach's Alpha, yielded values above 0.60 for each variable, thereby demonstrating acceptable internal consistency (See Table 2).

Table 1 Validity and Reliability Test Results

variabel	Hasil uji validitas	Cronbach's Alpha
Usability (X1)	r hitung > 0,19	> 0,60
Information Quality (X2)	r hitung > 0,19	> 0,60
Interaction Quality (X3)	r hitung > 0,19	> 0,60
User Satisfaction (Y)	r hitung > 0,19	> 0,60

The instrument met the minimum requirements for both validity and reliability, which means the data collected could be used for further statistical analysis with confidence.

4.3 Classical Assumption Test

Three diagnostic tests were conducted to confirm that the dataset met the assumptions required for multiple regression analysis.

- Normality Test The results indicated that the data followed a normal distribution.
- Multicollinearity Test All Variance Inflation Factor (VIF) values were below 10, signifying no multicollinearity problem.
- Heteroscedasticity Test The residuals displayed no discernible pattern, indicating the absence of heteroscedasticity.

4.4 Results of Multiple Linear Regression Analysis

The regression analysis was conducted to determine the effect of usability (X1), information quality (X2), and interaction quality (X3) on user satisfaction (Y).

Regression Equation:

$$Y = 0.965 + 0.421X_1 - 0.065X_2 + 0.267X_3$$

where Y represents user satisfaction, X1 represents usability, X2 represents information quality, and X3 represents interaction quality.

The regression constant is 0.965, meaning that if all independent variables are assumed to be zero, the user satisfaction value would remain at 0.965. The usability variable (X1) has a regression coefficient of 0.421 with a significance value of 0.000 (< 0.05), indicating that usability has a positive and significant effect on user satisfaction. The information quality variable (X2) has a regression coefficient of -0.065 with a significance value of 0.494 (> 0.05), meaning that information quality does not have a significant effect on user satisfaction. The interaction quality variable (X3) has a regression coefficient of 0.267 with a significance value of 0.020 (< 0.05), suggesting that interaction quality has a positive and significant effect on user satisfaction.

Furthermore, the coefficient of determination (R^2) was obtained at 0.758. This shows that 75.8% of the variance in user satisfaction can be explained by the three independent variables included in the model, while the remaining 24.2% is influenced by other factors not examined in this study.

4.5 T-test Findings

This analysis is used to determine the extent of influence of the independent variables, namely Usability Quality (X1), Information Quality (X2), and Service Interaction Quality (X3), on the dependent variable, User Satisfaction/Overall (Y), separately/partially. The following conditions apply:

- If the calculated t value is greater than the table t value, then the independent variables partially influence the dependent variable.
- If the calculated t value < t table, then the independent variable has no partial effect on the dependent variable.

To read the T distribution percentage table / T table, you can use the following formula:

$$T \text{ tabel} = (a/2 ; n - k - 1) \dots \dots \dots (5.2)$$

Keterangan :

a = Significant value 0.05 (95% confidence level)

k = Number of independent variables (independent variables)

n = Number of respondents

$$T \text{ tabel} = (a/2 ; n - k)$$

$$= (0,05/2 ; 100 - 3 - 1)$$

$$= (0,025 ; 96)$$

$$= 1,98$$

Table 2 Percentage Distribusion T

df	One Tail Two Tail	distribution table Significance Level				
		0,05 0,1	0,025 0,05	0,01 0,02	0,005 0,01	0,0005 0,001
95		1,6610518	1,9852510	2,3662430	2,6285757	3,3959036
96		1,6608814	1,9849843	2,3658207	2,6280158	3,3947747
97		1,6607146	1,9847232	2,3654073	2,6274678	3,3936698

From the results obtained, it can be seen that the value of the T distribution table / T table above which will be compared with the calculated T is. The following Table 4 shows the results of the T test calculation, namely:

Coefficients^a

Tabel 3 T-test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,258	1,395		2,334	,022
	X1	,379	,104	,462	3,633	,000
	X2	,064	,094	,091	,687	,494
	X3	,253	,107	,291	2,365	,020

The T-test results show that:

1. The Usability Quality variable (X1) has a significant effect on User Satisfaction, with a calculated t-value of 3.633 > t-table value of 1.984.
2. The Information Quality variable (X2) does not have a significant effect on User Satisfaction, with a calculated t-value of 0.687 < t-table value of 1.984.
3. The Interaction Quality variable (X3) has a significant effect on User Satisfaction, with a calculated t-value of 2.365 > t-table value of 1.984.

4.6 F-test Findings

The F-test was conducted to determine whether the independent variables Usability (X1), Information Quality (X2), and Interaction Quality (X3) simultaneously have a significant effect on the dependent variable User Satisfaction (Y) as shown in Table 5.

ANOVA^a

Tabel 4. F-Test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	564,401	3	188,134	55,796	,000 ^b
	Residual	313,578	93	3,372		
	Total	877,979	96			

Explanation:

- a) The calculated F value = 55.796 is greater than the F table value of 2.690.
- b) The significance value (Sig. = 0.000 < 0.05) indicates that the regression model is statistically significant.
- c) This means that usability, information quality, and interaction quality simultaneously affect user satisfaction on the Kerinci Regency Social Services website.

Interpretation:

The results of the F-test demonstrate that the WebQual 4.0 framework is suitable for explaining user satisfaction in this context. Even though not all individual variables were found to be significant in the t-test results (e.g., information quality), the joint contribution of the three variables significantly influences user satisfaction. This implies that website performance is best understood as the combined effect of usability, quality of information, and quality of interaction rather than each factor in isolation.

4.7 Discussion of Results

The empirical results suggest that both usability and interaction quality are critical determinants of user satisfaction with the Kerinci Regency Social Services website. The significant impact of usability aligns with previous research (Salamah et al., 2020) (Monita & Yadi, 2021), which emphasises the importance of intuitive navigation, interface simplicity, and functional design in enhancing user engagement.

The idea that responsive and efficient communication channels are essential in public sector digital platforms is further supported by the significant contribution of interaction quality. Users' opinions of service quality seem to be reinforced by features that allow for real-time feedback, unambiguous instructions, and prompt responses.

On the other hand, there was no statistically significant impact of information quality in this situation. This finding suggests that users may prioritize functional and interactive elements over purely informational aspects, even though completeness and accuracy of content are traditionally considered important. This is especially true when the website acts as a gateway for service transactions rather than an information repository.

These findings highlight the need for website managers to concentrate on improving interactive features and optimizing navigational efficiency while preserving sufficient information accuracy. User satisfaction is likely to increase significantly with improvements like responsive customer service tools, easily accessible complaint submission forms, and better menu structures.

The aforementioned analysis leads to the conclusion that user satisfaction on the Kerinci Regency Social Services website is highly influenced by usability and interaction quality. In the meantime, user satisfaction was not substantially impacted by the quality of the information. This implies that user satisfaction is more influenced by usability and positive customer service interactions than by the accuracy of the website's content.

5. Conclusion

The results of this study demonstrate that the quality of the Kerinci Regency Social Services website, when assessed through the WebQual 4.0 framework, is strongly determined by usability and interaction quality, whereas information quality shows no significant effect on user satisfaction. This indicates that users value practical aspects such as ease of navigation, functional accessibility, and responsive interaction more highly than the completeness or accuracy of information. The regression analysis confirms that 75.8% of the variation in user satisfaction can be explained by these three dimensions, with usability emerging as the most dominant factor. These findings contribute to the growing body of e-government research by highlighting the need for government institutions to prioritize improvements in user-friendly

design, interactive communication channels, and system responsiveness to ensure effective digital service delivery. Although information quality did not show a direct impact, maintaining accurate and relevant information remains essential for sustaining long-term trust and credibility. Future studies are encouraged to expand the model by including additional constructs such as trust, security, or system quality to provide a more comprehensive understanding of citizen satisfaction in digital government platforms.

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