

Analysis of Service Quality of the Sorong Regency Government Website using the WebQual 4.0 Method

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(received: 14 January 2026, revised: 24 January 2026, accepted: 25 January 2026)

Abstract

The rapid development of information technology has encouraged local government to adopt websites as platforms for delivering public information and services. This study aims to analyze the service quality of the Sorong Regency Government website based on user perceptions using the WebQual 4.0 method, which consists of three dimensions: usability, information quality, and service interaction quality. This study adopts a quantitative approach, with data collected through an online questionnaire administered to 49 respondents. The data were analyzed using SPSS, including validity and reliability tests and descriptive statistics. The results show that all 18 questionnaire items are valid and reliable, with a Cronbach's Alpha value of 0.763. The mean scores for each dimension are 3.43 for usability (agree), 3.39 for information quality (somewhat agree), and 3.37 for service interaction quality (somewhat agree). These findings indicate that the overall service quality of the Sorong Regency Government website ranges from moderate to good, with usability identified as the strongest dimension. The novelty of this study lies in its focus on evaluating a local government website in a developing regional context, providing user-based evidence on WebQual 4.0 dimensions that remain underexplored in similar settings. This study provides empirical evidence that can support efforts to improve the quality of digital public services in Sorong Regency.

Keywords: government website, service quality, WebQual 4.0

1 Introduction

In recent years, rapid technological development has become a major driver of social transformation across many aspects of human life[1]. In particular, the Industrial Revolution 4.0 has accelerated the advancement of information technology, enabling the delivery of both commercial and non-commercial information more efficiently [2]. In the contemporary era, technological innovation continues to evolve rapidly, leading to its widespread adoption in daily activities. In general, technology can be defined as the application of scientific knowledge for practical purposes in human life [3]. This development includes the use of applications, websites, and other digital platforms to support information services, which has also been implemented by the Sorong Regency Local Government through an official website as a medium for public information dissemination[4].

In this context, a website is a collection of information pages accessible on the internet, allowing users worldwide to access information as long as an internet connection is available[5]. The use of technology plays an important role in supporting organizational objectives, whether for business purposes or for disseminating essential information. In the field of communication, the concept of new media has become increasingly prominent, referring to digital communication media that rely on computers or mobile devices connected to the internet, commonly known as online media [6].

Furthermore, information technology has significantly influenced the way individuals perform daily activities, particularly in obtaining and disseminating information. One notable development is the transition from print media to online media through computers and mobile devices, which allows information to be accessed more quickly and efficiently [7]. As a developing region, Sorong Regency has also embraced advancements in information technology to support the dissemination of information and its application in everyday life. The official website of the Sorong Regency Government serves as an important medium for connecting government institutions with external

parties and the public. Among the various internet-based services available globally, websites remain among the most widely used platforms in daily life [8].

Moreover, the Sorong Regency Government website functions not only as a source of information but also as a representation of institutional identity and service quality perceived by the community. Therefore, it is important to examine website quality and usage from the user perspective [9]. Various information media tools are currently available to integrate and deliver essential information effectively, with websites among the most prominent examples[10]. Government websites are designed to introduce institutional profiles and serve as public service platforms that allow citizens to access information, submit complaints, and engage in other forms of interaction[11].

In this regard, this study seeks to examine the quality of services provided by the Sorong Regency Local Government to the community, particularly through its official website. Specifically, the quality of the Sorong Regency Government website is assessed based on user perceptions using the WebQual 4.0 approach, which encompasses three main dimensions: usability, information quality, and service interaction quality. The local government has demonstrated its commitment to improving public services by utilizing information technology, particularly through the development of its official website[12]. Through technological advancements, websites enable organizations to disseminate information more effectively to the public. A website also provides various communication facilities, such as chat rooms, email, and instant messaging, allowing users to explore information using browser software [13]. Preliminary assessments indicate that website quality is generally good, warranting a more in-depth follow-up analysis .

Nevertheless, government websites have been widely used to support administrative and managerial objectives, supported by the community's growing capability to utilize information technology[14]. Quality measurement is therefore essential to identify potential issues or shortcomings of the Sorong Regency website, such as an unattractive interface design, delays in information updates, and limited communication between users and website administrators[15]. The community has the right to access accurate information through existing information systems, while the local government is responsible for continuously developing and maintaining its website. Consequently, the Sorong Regency Government must optimize the use of information and communication technology to ensure the availability of accurate, up-to-date information on its official website, accessible at <https://sorongkab.go.id>.

Furthermore, previous studies have emphasized the importance of the quality of local government websites in supporting effective public service delivery [16]. Several studies, including those examining the BPJS Kesehatan and BKPSDM Kota Palembang websites, have employed the WebQual 4.0 method to measure user satisfaction[17]. Although these studies provide valuable insights, certain research gaps remain. First, most existing studies do not specifically address the context of Sorong Regency, which possesses unique demographic, geographic, and technological infrastructure characteristics that influence user interaction and perception. Second, prior research has not sufficiently examined how the three dimensions of WebQual 4.0 usability, information quality, and service interaction quality interact to shape user satisfaction, particularly across regions with varying levels of technological development[18].

Accordingly, this study aims to fill the existing research gap by conducting a comprehensive analysis of the Sorong Regency Local Government website from a user perspective. In addition, this study provides context-specific, practical recommendations for improving website quality in line with local needs and conditions. The findings are expected to contribute to the development of more effective and responsive strategies for enhancing the quality of digital public services in Sorong Regency.

2 Literature Review

Research conducted by Rahjan Saputra et al., entitled Analysis of Local Government Website Quality Using the Web Qual 4.0 Method and Importance Performance Analysis. The results of this study indicate that user satisfaction with government websites is quite satisfactory across 81% of indicators, while user expectations for the suitability analysis results are 80%, and the average gap is -0.01. The results of this study show that user satisfaction with government websites is quite satisfactory across 81% of indicators, while user expectations for the suitability analysis results are

80%, and the average gap is -0.81. Recommendations for improvement can be provided, especially for the IQ3 attribute (providing up-to-date information) and the SIQ3 attribute (sense of security in submitting personal data) in quadrant I, to improve the quality of public services through websites. Furthermore, research conducted by Yahdi Kusnadi & Fajar Hadi Kurnia entitled “Measuring Website Service Quality on User Satisfaction Using the Webqual 4.0 Method (Case Study: Cibinong District Court Class 1B)”. Of the three dimensions of Webqual 4.0, only information quality and interaction quality were found to influence website user satisfaction, while the usability dimension had no effect. Based on the results of the F-test and the significance level.

Based on the results of these two studies, it can be concluded that the quality of government agency websites significantly affects user satisfaction. In general, users are quite satisfied, but there is still a gap between performance and expectations that needs attention. The aspects of information quality and interaction quality have been shown to be the main factors affecting user satisfaction, particularly in terms of the provision of up-to-date information and a sense of security when submitting personal data. Therefore, efforts to improve the quality of government websites should focus on these two aspects to ensure website-based public services are more optimal, effective, and able to meet the needs and expectations of the community.

3 Research Method

The research methodology employed in this study is illustrated in Figure 1. This research begins by identifying problems with the quality of the Sorong Regency Local Government website using the WebQual 4.0 framework. The research variables are determined based on the three main WebQual 4.0 dimensions, namely usability, information quality, and service interaction quality. The research instrument, in the form of a questionnaire, is developed according to WebQual 4.0 indicators and tested for validity and reliability. Data are collected through an online questionnaire distributed to selected website users using purposive sampling. The collected data are analyzed using descriptive statistics in SPSS to evaluate the website's quality based on user perceptions. The analysis results are then interpreted to formulate conclusions and recommendations for improving website service quality.

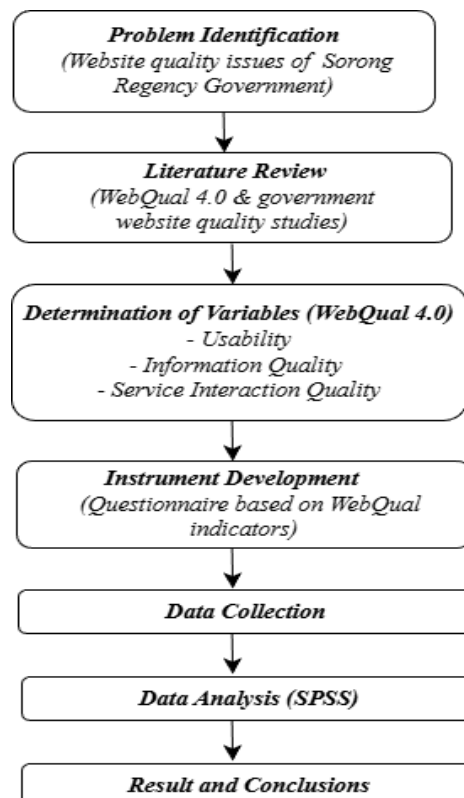


Figure 1 Research methodology framework

Figure 1 summarizes the overall research procedure, starting from problem identification, followed by questionnaire development and data collection, to descriptive data analysis and the formulation of conclusions and recommendations.

4 Results and Analysis

The data obtained from this study on the quality of the Sorong Regency Local Government website using the WebQual 4.0 method were analyzed using SPSS software.

Validity Test

A validity test was conducted to determine the extent to which the questions in the questionnaire were able to measure the research variables, namely usability, information quality, and service interaction quality.

Table 1 Results of the WebQual validity test

Item	Result	Description
1	0.738	Valid
2	0.572	Valid
3	0.820	Valid
4	0.689	Valid
5	0.755	Valid
6	0.728	Valid
7	0.754	Valid
8	0.684	Valid
9	0.754	Valid
10	0.779	Valid
11	0.404	Valid
12	0.720	Valid
13	0.820	Valid
14	0.772	Valid
15	0.593	Valid
16	0.732	Valid
17	0.841	Valid
18	0.705	Valid

Based on Table 1, all 18 statement items have a correlation value (r-count) between 0.404 and 0.841 and are declared “valid” because they are greater than the r-table value of 0.284 (N=49, $\alpha=0.05$). Therefore, these statements can be considered valid (significant).

Reliability Test

Reliability testing is conducted to determine whether an instrument is reliable for use as a data collection tool because it is already in good condition. The decision criterion for determining reliability testing is that if the r value (Cronbach's alpha) is greater than 0.60, the instrument is considered reliable. Conversely, if the r value (Cronbach's alpha) is less than 0.60, the instrument is considered unreliable. The following are the results of the reliability testing, as shown in Table 2:

Table 2 Reliability test

Reliability Statistics	
Cronbach's Alpha	N of Items
0.763	19

A research instrument is considered reliable if the Cronbach's Alpha value exceeds 0.7. Based on the results of the SPSS test that has been conducted, the result is 0.763, which means that the instrument is reliable.

Descriptive Test Result

Descriptive analysis was performed using IBM SPSS Statistics software. This analysis was conducted by finding the mean value of the website quality assessment results. The analysis results can be seen in the table below:

Table 3 Descriptive test results

Descriptive Statistics			
	N	Mean	Std. Deviation
X1	49	3.43	0,714
X2	49	3.39	0,804
X3	49	3.37	0,791
Valid N (listwise)	49		

Based on Table 3, it can be seen that the average values for the three WebQual variables indicate a good category. The Usability Quality variable (X1) has the highest average value of 3.43, indicating that the usability and ease of use of the Sorong Regency Government website are rated highest by respondents. Furthermore, the Information Quality variable (X2) obtained an average value of 3.39, indicating that the quality of information, such as clarity, completeness, and relevance, is considered good. The Service Interaction Quality variable (X3) has an average value of 3.37, which is the lowest value among the three dimensions, but still falls into the good category. This indicates that the aspects of trust, security, and service interaction still need some improvement. The standard deviation values for the three variables ranged from 0.714 to 0.804, indicating that the variation in respondents' answers was relatively stable and not too wide. This can be seen in Table 4 below:

Table 4 Interval

Variable	Interval Mean	Category
X1	3.425	Agree
X2	3.388	Somewhat agree
X3	3.370	Somewhat agree

Descriptive analysis was conducted to determine the respondents' perception levels of the three main dimensions of WebQual 4.0. The descriptive statistical calculations are presented in the following table:

Table 5 Descriptive statistical test result

Variable	N	Mean	Std. Deviation	Category
X1 (Usability)	49	3.43	0.714	Agree
X2 (Information Quality)	49	3.39	0.804	Somewhat agree
X3 (Service Interaction Quality)	49	3.37	0.791	Somewhat agree

Based on Table 5, it can be explained that: The Usability Dimension obtained the highest average of 3.43 (Agree category). This indicates that users consider the appearance, structure, and ease of navigation of the Sorong Regency Government website to be good and easy to use. The Information Quality Dimension obtained an average of 3.39 (Somewhat Agree category). This means that the information presented on the website is quite relevant, accurate, and easy to understand, but needs to be improved in terms of content freshness and completeness. The Service Interaction Quality Dimension received an average score of 3.37 (Somewhat Agree category). These results indicate that user interaction with website services is still not optimal, especially in terms of communication and response from site administrators. The score range can be seen in Table 6 below:

Table 6 Value range

Category	Value Range	Description
Very Low	1.00 – 1.80	Strongly disagree
Low	1.81 – 2.60	Disagree
Moderate	2.61 – 3.40	Somewhat agree
High	3.41 – 4.20	Agree
Very High	4.21 – 5.00	Strongly agree

The analysis using the WebQual 4.0 method shows that the quality of the Sorong Regency Local Government website is generally in the fairly good to good range. The usability dimension received the highest average score of 3.43 (agree), indicating that the website is easy to use, has clear navigation, and provides smooth page access. These results align with research [9] which confirms that ease of use plays an important role in increasing user satisfaction. Meanwhile, the information quality dimension, with a score of 3.39 (somewhat agree), indicates that the information presented is quite relevant and clear but still needs improvement in terms of updates and content completeness to remain accurate and credible. Service interaction quality scored 3.37 (somewhat agree category), indicating that user interaction with website administrators is not yet optimal, especially in terms of communication and service response. This condition aligns with the findings of Ramadhani & Wahyudin, who explain that most government websites still lack two-way communication features such as live chat or feedback forms [12].

Overall, the results of this study reinforce the findings [18] which show that the success of government agency websites is highly dependent on the quality of service interactions and the consistency of content updates. Therefore, the Sorong Regency Government needs to improve three main aspects, namely improving the appearance and navigation to make it more attractive and responsive (usability), updating content regularly to maintain the relevance of information (information quality), and developing two-way communication features to strengthen relationships with the community (service interaction). This is in line with research conducted by Hadi (2016), which states that usability is related to the pragmatic aspects of how users interact with the web, such as appearance, design, clarity of user interaction with the web, ease of use, ease of navigation, and competence. The better the usability of a website, the more it will influence user satisfaction [19]. With optimization in these three dimensions, the Sorong Regency Local Government website is expected to become a more interactive, informative, and reliable digital public service platform in line with the research objectives that have been set.

5 Conclusion

This study evaluated the quality of the Sorong Regency Local Government website using the WebQual 4.0 framework, comprising usability, information quality, and service interaction quality. The results indicate that users perceive the website's quality as good overall. However, several aspects within each dimension still require improvement to enhance user experience and the effectiveness of digital public services. These findings highlight the importance of continuously evaluating government websites as primary channels for public information and services. A website that is easy

to use, provides accurate and up-to-date information, and supports effective interaction can improve public trust, transparency, and satisfaction with government services. For local governments such as Sorong Regency, improving website quality is a strategic step toward strengthening digital governance and optimizing public service delivery. Based on the results of this study, several practical recommendations can be proposed. First, improvements in usability can be achieved by simplifying website navigation, enhancing page layout consistency, and optimizing website access across different devices. Second, information quality should be strengthened by ensuring that content is updated regularly, presented clearly, and supported by accurate and complete information. Third, service interaction quality can be improved by providing responsive contact features, such as active feedback forms or integrated communication channels, to facilitate interaction between the government and the community. Implementing these recommendations is expected to improve the overall quality of the Sorong Regency Local Government website and support more effective digital public services in the future.

Acknowledgement

The author would like to thank Muhammadiyah University Sorong, particularly the Information Technology Education Study Program, Faculty of Teacher Training and Education, for the academic support provided. In addition, the researcher would also like to thank the Sorong Regency Government for granting permission and assisting in the provision of data, so that this research could be completed successfully. Hopefully, the results of this research can provide benefits and contribute to the development of technology-based service quality.

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