

Evaluation of the West Papua Central Statistics Agency Website Quality Using the WebQUAL 4.0 Method

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Article Information	ABSTRACT
Article History Received : November 27, 2024 Revised : December 05, 2024 Published : January 04, 2025	As the official statistical data provider in Indonesia, BPS always innovates to provide better services to the community. By utilizing information technology, BPS has presented various online services such as websites. This research aims to evaluate the quality of the West Papua BPS website using the webqual 4.0 method. The WebQUAL process involves measuring user perceptions of a website's quality based on three primary dimensions: Usability, Information Quality, and Service Quality. The flow of this research includes planning, data collection and data analysis. This study used 139 respondents. Based on the results of the analysis that has been done, the results of the hypothesis can be concluded that the three dimensions of Usability, Information Quality and Service Quality are in the category (Accepted) where users feel fast with the quality of the West Papua BPS website.
Keywords: Webqual 4.0; SmartPLS; BPS;	

INTRODUCTION

In this modern era, statistical data is now the backbone of decision-making by the government, private institutions, academics, and the general public(Wahyu & Supiadi, 2023). Especially in the world of education itself, both students, students, and lecturers are very dependent on statistical data to support their assignments and research. The BPS (Badan Pusat Statistik) survey in 2022 shows that most users of statistical data are from academia, this can emphasize the importance of the role of data in the teaching and learning process(Putri & Tileng, 2021). BPS, which is a statistical service provider, has a big influence in everyone's decision making, therefore BPS has a full obligation to facilitate the delivery of statistical data to people who need it easily and accurately.

As a provider of official statistical data in Indonesia, BPS always innovates to provide better services to the community. By utilizing information technology, Subscribe to DeepL Pro to edit this Visit www.DeepL.com/pro for more information. BPS has presented various online services such as websites. This website can be accessed from various devices connected to the internet(Sonny & Rizki, 2021). With the existence of online services such as this website, it will make it easier for the community to be able to get information quickly and accurately through mobile devices(Risdiyanto et al., 2024). The presence of the BPS website has increased the efficiency of public services. The public can now interact with BPS more easily, both to submit complaints and to obtain the latest information on statistics. A successful website is one that is able to attract the interest and attention of many users(Yasmin Safira et al., 2024).



Figure 1. Website interface BPS Papua Barat

As a provider of official statistical data in Indonesia, BPS always innovates to provide better services to the community. By utilizing information technology, BPS has presented various online services such as websites. According to Kotler (2002) User satisfaction is the level of user feelings as a result of the comparison between user expectations and the real results obtained from the product (Sanglisa & De Kweldju, 2024). Therefore, the identification of factors that cause user dissatisfaction will be the main basis in designing solutions to improve the quality of the BPS website (Dwi Syafutra, 2021). It is therefore expected that this method will facilitate user evaluation for the BPS website.

This study aims to comprehensively identify the factors contributing to user dissatisfaction with the BPS West Papua website. By employing the WebQUAL 4.0 evaluation method, this research will quantitatively measure the website aspects that require improvement to enhance user satisfaction.

RESEARCH METHODS

This research consists of several stages, namely the planning stage, the data collection stage, the data analysis stage and for the final stage is the conclusion. To make it easier to understand, it can be seen in Figure 1.

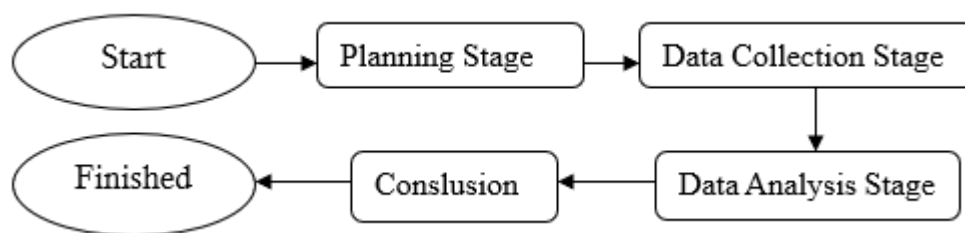


Image 2. Research Methods

Planning Stage

Planning is the key to achieving efficient and effective execution (I Wayan Jawat et al., 2020). The planning stage starts with identifying the problems that exist on the BPS website. Through the identification process, we will get a clear picture of the problems faced by the BPS website and the priority improvements that need to be made later. One way to identify problems is by using a

questionnaire. A questionnaire is a research instrument consisting of a series of written questions asked to respondents to obtain data (Amelia, 2020).

Data Collection Stage

The data for this study was collected through an online survey using Google Form which was distributed to 139 respondents who are users of the BPS website who live in Manokwari. Social media was utilized as a channel for questionnaire distribution. This study used 16 indicators to measure 6 variables. The data collected was then analyzed using SmartPLS 4.0 software. Details of indicators for each variable can be seen in the following table.

Table 1. Indicator Variable

Variable	Code	Indicator
<i>Usability</i>	U1	Saya merasa website BPS mudah untuk di oprasikan
	U2	Saya merasa mudah dalam mengakses website BPS
	U3	Saya merasa tampilan website BPS menarik
	U4	Saya merasa mudah untuk berinteraksi dalam website BPS
	U5	Saya merasa mudah bernavigasi dalam website BPS
<i>Information Quality</i>	IQ1	Saya merasa informasi yang di sediakan cukup jelas
	IQ2	Saya merasa informasi yang di sediakan selalu terkini
	IQ3	Saya merasa infomasi yang di sediakan dapat di percaya
	IQ4	Saya merasa informasi yang di sediakan cukup relevan
	IQ5	Saya merasa informasi yang di sediakan mudah di pahami
<i>Service Quality</i>	SQ1	Saya merasa aman saat melakukan aktivitas di dalam website BPS
	SQ2	Saya merasa merasa aman ketika memberikan data pribadi
	SQ3	Saya merasa mudah dalam memberikan masukan pada website BPS
	SQ4	Saya merasa website BPS memiliki reputasi yang baik
	SQ5	Website BPS membuat saya mudah dalam berkomunikasi dengan orang lain
<i>User Satisfaction</i>	US1	Saya merasa puas dengan fasilitas yang ada pada website BPS

The selection of indicators in this questionnaire refers to the Webqual 4.0 assessment framework. The focus of the assessment includes three main dimensions, namely usability, information quality, and service interaction. To get a comprehensive picture, User Satisfaction is added regarding the overall assessment of website quality.

Data Analysis Stage

The data analysis stage is carried out starting from collecting back the questionnaires that have been distributed and processing the data using SmartPLS 4.0 software. Data analysis includes testing the reliability and validity of constructs through the Outer Model and Inner Model, and finally testing hypotheses to verify the truth of the research model.

Conclusion

The final stage of this research is drawing conclusions. The conclusion is a summary of our understanding of the information available (Qausar et al., 2023). The conclusion is obtained based on the results of data analysis which aims to identify the quality of each variable and reveal the dominant variable that affects the satisfaction of BPS website users.

RESULTS AND DISCUSSION

Respondent Analysis

Respondents are research subjects or people who are asked to provide answers regarding perceptions and facts on the topic being discussed (Arikunto, 2006). The sample of this study consisted of 139 respondents who accessed the BPS website. Respondents were asked to fill out a questionnaire which included demographic data (age, occupation) and 16 statement items related to the research variables. The following is the respondent data:

Table 2. Respondents

Category	Classification	Total
Age	18-22	14 (10%)
	> 23	125 (90%)
Jobs	Student	119 (86%)
	Private Employment	6 (4%)
	More	14 (10%)

Data Analysis

In this study, the software used by researchers to process data is SmartPLS, where the data to be processed is a Likert scale that has been filled in by respondents. According to (Sugiyono, 2012) the Likert scale is a measuring tool designed to measure a person's level of agreement or disagreement with certain statements (Sumartini et al., 2020).

Measurement Model (Outer Model)

A. Validation Test

According to (Sugiyono, 2006) The validity test stage is carried out to test the accuracy of the tools to be used in the study (Fathurahman & Ahman, 2020). The validity test aims to ensure that the questionnaire we use can collect accurate and relevant data.

1. Convergent Validity

To ensure the questions in our questionnaire are accurate and cover all aspects we want to examine, we need to conduct a validity test. One way to do this is by looking at the outer loading values. A value above 0.7 indicates validity. The purpose of this validity test is to measure the extent to which our indicators accurately measure the construct we want to measure. In other words, it assesses whether the questions in our questionnaire align with the concept we are trying to investigate. Since all outer loadings exceeded 0.7, it can be concluded that the items are valid. The high outer loadings indicate a strong relationship between the items and the latent construct. This implies that the items used in this study accurately represent the concept being measured.

Table 3. Loading Factor

Dimensi	Usability (X1)	Information Quality (X2)	Service Quality (X3)	Overall (Y)
US1	0.920			
US2	0.846			
US3	0.858			
US4	0.853			
US5	0.895			
IQ1		0.884		
IQ2		0.849		
IQ3		0.806		
IQ4		0.898		
IQ5		0.891		
SQ1			0.888	

Dimensi	Usability (X1)	Information Quality (X2)	Service Quality (X3)	Overall (Y)
SQ2			0.886	
SQ3			0.855	
SQ4			0.876	
SQ5			0.903	
OV				1.000

2. Average Variance Extracted (AVE)

Another criterion for validity, besides examining outer loadings, can be determined by the Average Variance Extracted (AVE). An AVE value above 0.5 indicates adequate validity. AVE measures the proportion of variance explained by the latent construct relative to the total variance of the indicators. A higher AVE value signifies that the latent construct provides a better explanation for the variance in the indicators.

Table 4. Average Variance Extracted (AVE)

Variable	Average Variance Extracted (AVE)
Usability	0.766
Information Quality	0.750
Service Quality	0.777

Because all Average Variance Extracted (AVE) values exceeded 0.5, it can be concluded that the items are valid. An AVE value greater than 0.5 indicates that the latent construct adequately explains a substantial proportion of the variance in the indicators. Given that both outer loadings and AVE values surpass the thresholds of 0.7 and 0.5 respectively, it can be inferred that all items exhibit satisfactory validity. This implies that the latent construct is well-formed and reliable.

B. Reliability Test

The reliability test has the aim of measuring how consistent the measurement results are (Rifandi Akbar et al., 2023). After the discriminant validity test shows that the items in the questionnaire are valid, the next step is to conduct a reliability test. This test aims to measure the level of internal consistency of the research instrument. If the Composite Reliability (ρ_o) and Cronbach's Alpha values for each latent variable have a value greater than 0.7, it can be concluded that the questionnaire is reliable and can be used to collect research data. For testing can be seen in table 3 below.

Table 5. Reliability Test

Variable	Composite reliability (ρ_o)	Cronbach's alpha
Usability	0.925	0.923
Information Quality	0.920	0.916
Service Quality	0.929	0.928

Based on the Composite Reliability (ρ_o) and Cronbach's Alpha values obtained, it can be concluded that all variables in this study have good reliability. The value of Composite reliability (ρ_o) and Cronbach's Alpha which is greater than 0.7 indicates that the research instrument used is quite reliable in measuring these variables

C. Inner Model Test

There are two stages that will be carried out in testing this inner model, namely: R-Square and F-Square.

1. R-Square

The higher the R-square value, the stronger the influence of the independent variable on the dependent variable. R-square with a value of 0.67 has a strong effect, R-square with a value of 0.33 has a moderate effect, and R-square with a value of 0.19 has a weak effect (Rahma et al., 2022). This study has 1 variable Y as Overall.

Table 6. R-Square

Variable Y	R-square
Overall	0.738

The table above presents an R-squared value of 0.738. This indicates that the constructed regression model is able to explain 73.8% of the variability in the dependent variable. According to general standards, an R-squared value of 0.738 is categorized as strong, as it exceeds the threshold of 0.67.

2. F-Square

The F-square itself has 3 effects including

- 1) F-square with a value of 0.02 indicates a weak Overall
- 2) F-square with a value of 0.15 shows enough on the Overall
- 3) F-square with a value of 0.35 indicates a strong Overall

Table 7. F-Square

Variable X	Variable Y (Overall)
<i>Usability</i>	0.003
<i>Information Quality</i>	0.161
<i>Service Quality</i>	0.091

Based on the F-square analysis, it can be concluded that among the three variables examined, Information Quality has the most significant impact on the Overall variable. High-quality information has proven to be the primary determinant in enhancing user satisfaction. While Usability and Service Quality also contribute, their influence is relatively weaker compared to Information Quality.

D. Hypothesis Test

A hypothesis is a conjecture or provisional result to a research question (Muslimah, 2020). This study has 3 hypotheses, namely Usability to Overall, Information Quality to Overall and Service Quality to Overall. The way of working in hypothesis testing can be noted if the t value > p values then the hypothesis is accepted, otherwise if t values < p values then the hypothesis is not accepted. To be clearer, it can be seen in the following table.

Table 8. Hypotesis

Variable	Hypothesis	T values	P values	Description
<i>Usability -> Overall</i>	H1	0.632	0.533	Accepted
<i>Information Quality -> Overall</i>	H2	3.940	0.000	Accepted
<i>Service Quality -> Overall</i>	H3	2.695	0.007	Accepted

Based on the test table above, the following results are obtained:

Hypotesis 1 : Usability to Overall, from the test results, the t values $>$ p values (Accepted) are obtained, which means that the contents of the website can be accepted by users. Hypothesis.

Hypotesis 2 : Information quality on Overall, from the test results it is obtained t values $>$ p values (Accepted) which means that the quality of information provided by the website can be accepted by users. Hypothesis

Hypotesis 3 : Service Quality on Overall, from the test results, the t values $>$ p values (Accepted) are obtained, which means that the quality of website services can be accepted by users.

CONCLUSION

Conclusion

Based on the results of the analysis using the WebQual method, the hypothesis test obtained from the three dimensions of Usability, Information Quality and Service Quality on Overall is in the (Accepted) category, so it can be concluded that the website under study has very good quality in all aspects assessed. The three main dimensions of WebQual, namely Usability, Information Quality, and Service Quality, show satisfactory performance. This indicates that the website is well designed, easy to use, presents accurate and relevant information, and provides responsive and satisfying services for users.

Advice

The author recommends that the BPS conduct periodic evaluations of its website, for example, every 6-12 months. This is essential to monitor progress and ensure the ongoing quality of the website. The results of this research are expected to provide valuable input for improving the quality of the BPS West Papua website.

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