

Website Evaluation of DISPERDAG Section of the Average Price of Standard Needs Using the WEBQUAL 4.0 Method

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ABSTRACT

DISPERDAG of Madiun City is one of the organizations that has utilized technology. The community can easily access and get price updates for basic necessities at Pasar Besar City of Madiun. The Internet helps support strong governance management, which benefits its effectiveness. Its functions include making it easier to get information, access public services, communicate with the public, and others. DISPERDAG aims to continue to provide quality services. The quality of services provided to the public must complement the implementation of website-based services so that the public continues to use SISKAPERBAPO services. To provide the best service to users, government institutions should prioritize service quality. Therefore, the success of the service quality of the SISKAPERBAPO website has not been known as long as the website is implemented. This is because there has never been an evaluation of website quality based on user satisfaction. It goes without saying that a website that is useful for assisting users in obtaining information must maintain quality in terms of information delivery and user interaction. Good service quality is offered from the user's point of view as well as the service provider's point of view.

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1. INTRODUCTION

Technology is part of supporting activities in various sectors of companies/organizations whose development should not be ignored. Because, with the existence of information technology makes work more effective and efficient [1]. Along with many government organizations using information technology as a means of disseminating information and offering public services online. The Madiun City Trade Office is one of the organizations that has utilized technology. One of the technologies used as a service for the community by DISPERDAG is SISKAPERBAPO which can be accessed at <https://siskaperbapo.jatimprov.go.id>, which functions as a medium of information communication and a means for the public to find out about public services/public communicative programmed by DISPERDAG. The community can easily access and get price updates for basic necessities at Pasar Besar City of Madiun. The existence of internet facilities helps governance management to be stronger and structured which results in more effective performance [2]. In accordance with the mission of DISPERDAG to continue to provide quality services for the community, especially the City of Madiun.

The quality of services provided to the public in the form of a website as digital access is expected to make it easier for users so that later the public will continue to use the SISKAPERBAPO service to see price updates so as to minimize fraud in the selling price aspect of basic commodities. In providing the best service to users, government institutions should prioritize service quality. Therefore, the success of the service quality of the SISKAPERBAPO website has not been known as long as the website is implemented. This is because there has never been an evaluation of website quality based on user satisfaction [3]–[5]. It goes without saying that a website that is useful for assisting users in obtaining information must maintain quality in terms of information delivery and user interaction [6]. Good service quality is offered from the user's point of view as well as the service provider's point of view.

Satisfaction evaluation was carried out on one of the DISPERDAG websites with the aim of providing a recommendation for the DISPERDAG website manager to find out whether the developed website has good service quality for users (the public). This evaluation activity was carried out because the information provided by DISPERDAG has not been effectively absorbed through this website so that people are not too interested in visiting digital sites as a means of information. Is it because the website is difficult to access or people are not used to digital sites to obtain information about prices and trends of staple foods and so on. User satisfaction plays an important role in evaluating the quality of services provided through the website as a reference for determining the level of satisfaction required by users [7]–[9]. Evaluation of website service quality can be used as a material consideration to find out whether website quality has a significant relationship with user satisfaction for users, and whether the site provides high quality information to users, interesting interactions, and proper use by evaluating website effectiveness using effectiveness measurements from perspective of user satisfaction using the webqual 4.0 method [10]–[12].

The evaluation phase was carried out using the webqual method based on user perceptions to measure the quality of the SISKAPERBAPO website. There are several methods that can be used to measure quality, but in the context of this study the webqual method was used to measure the quality of the SISKAPERBAPO website. The webqual method is considered the most appropriate to use because other methods also measure quality, but not for assessing websites but aspects of their services. In addition, the webqual method only produces a value of the quality of a website, then it is continued with an importance-performance analysis to obtain information on which aspects have met user needs and which aspects need improvement according to user expectations. In obtaining the data, the researcher will provide questionnaires to the general public in order to measure the quality of the website [13]–[17]. With activities directly related to DISPERDAG which is responsible for providing public services in trade, markets and consumer services, the selection of respondents is considered very important. The results of these respondents were used to measure the respondent's opinion about the quality level of SISKAPERBAPO before asking the public to answer a questionnaire about user experience with the SISKAPERBAPO website. The webqual 4.0 method is a very effective measurement technique for assessing website quality which is determined by three variables, namely Usability Quality, Information Quality, and Interaction Quality.

2. RESEARCH METHOD

The research method used is a questionnaire-based survey method that is distributed to respondents, namely the general public. The prepared questionnaire contains a list of questions based on Table 1 [17]–[20], namely the webqual 4.0 Instrument. In the webqual 4.0 standard, the total number of questions is 23 questions consisting of 7 questions for usability dimensions, 7 questions for information quality dimensions, 6 questions for service interaction quality dimensions and 12 questions for user satisfaction.

Table 1. Question Variables

Website Quality Dimensions	Webqual 4.0 Variables
Usability	1. Do users find it easy to learn the operation of the website (X1) 2. Is the interaction between the website and users clear and easy to understand (X2) 3. Do users find it easy to navigate the website (X3) 4. Do users find the website easy to use (X4) 5. Does the website have an attractive appearance (X5)

Information	6. Does the design match the type of website (X6)
	7. Do users find it easy to find the information they are looking for (X7)
	1. Does the website provide accurate information (X8)
	2. Does the website provide reliable information (X9)
	3. Does the website deliver on time (X10)
	4. Does the website provide relevant information (X11)
	5. Does the website present information that is easy to understand (X12)
Interaction Quality	6. Does the website provide complete and detailed information (X13)
	7. Does the website present information in an appropriate/proportionate format (X14)
	1. Does the website have a good reputation (X15)
	2. Does the website give users a sense of security when downloading (X16)
	3. Does the website provide space to register as a member (X17)
	4. Does the website maintain the security of user/member personal data (X18)
	5. Does the website provide space for discussion between members (X19)
User Satisfaction	6. Does the website present information according to user needs (X20)
	1. Do you like the appearance of the website (X21)
	2. Do you enjoy interacting with this website (X22)
	3. Does switching access from the main page to another page feel fast (X23)
	4. Can the website be accessed properly using gadgets (X24)
	5. Can the website be accessed properly via various browsers (X25)
	6. The website can be used as an example for other similar websites (X26)
	7. Do you think the Polmed website uses the right image? (X27)
	8. Do you think the Polmed website uses the appropriate font? (X28)
	9. Do you think the Polmed website has attractive colors? (X29)
	10. Do you think the download speed on the Polmed website is sufficient? (X30)
	11. Do you think the Polmed website reflects the identity of a university? (X31)
	12. Do you think the Polmed website has a structured and consistent layout? (X32)

In distributing the questionnaire later, to measure the parameters of each variable using a Linkert scale with a score in Table 2 [21] as follows :

Table 2. Parameter assessment

No	Parameter	Skor
1	Strongly Disagree	1
2	Don't agree	2
3	Agree	3
4	Strongly agree	4

After getting the method for measurement and assessment, the next step is to collect data. Data collection was obtained from DISPERDAG as the object of research. Data collection methods include observation, interviews, surveys and literature studies.

1. Observation, this stage is carried out as a search for research objects that are in accordance with the scope of the discussion, namely the evaluation of the DISPERDAG website to measure user satisfaction, namely the community in using the SISKAPERBAPO information technology platform.
2. Interview, this activity aims to obtain information about the SISKAPERBAPO information technology platform regarding features, functions and information on public services provided to users/community. All of this information will later be used to create measurement variables and assess user satisfaction with research outcomes in the form of recommendations for improvements based on user and expert judgment.
3. Survey, in this study for the survey stage using a questionnaire distributed to respondents, namely the general public. Furthermore, the data obtained from the distribution of the questionnaire was carried out for data analysis which included data testing (validation test and reliability test), hypothesis testing (multiple linearity) and results testing (Normality Test and Heteroscedasticity Test). The distribution of questionnaire questionnaires to 57

respondents (general public) obtained data that can be used as an evaluation can be seen in Table 3 [22] below :

Table 3. Respondents' Mapping

Description	Frequency
Questionnaires Distributed	57
Returned Questionnaire	57
The Questionnaire Used	57

The 57 respondents involved in this study can be classified into several groups, namely age, education and gender as shown in Figure 1 below :

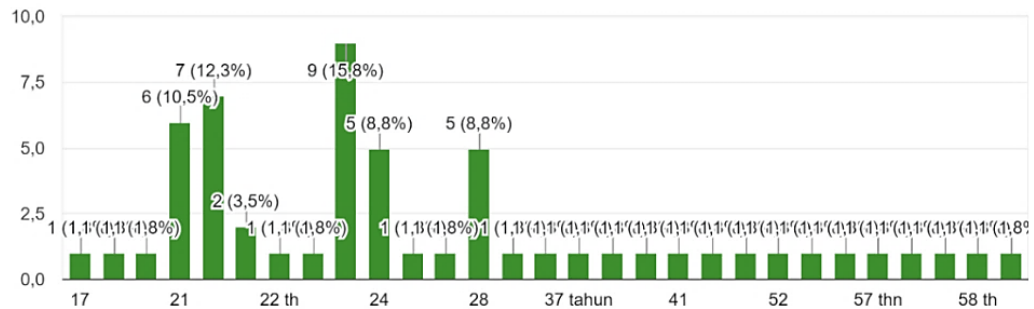


Figure 1. Classification of Respondents' data based on age

4. Library Studies, activities that aim to obtain data related to relevant topics such as books, journals, internet and others.

Then after obtaining the required research data, in Figure 2 below is the research flow as a description of the stages starting from problem identification, data collection, making questionnaires as a webqual 4.0 instrument, data analysis, data assessment, results and conclusions on the research object, namely the Technology platform SISKAPERBAPO information.

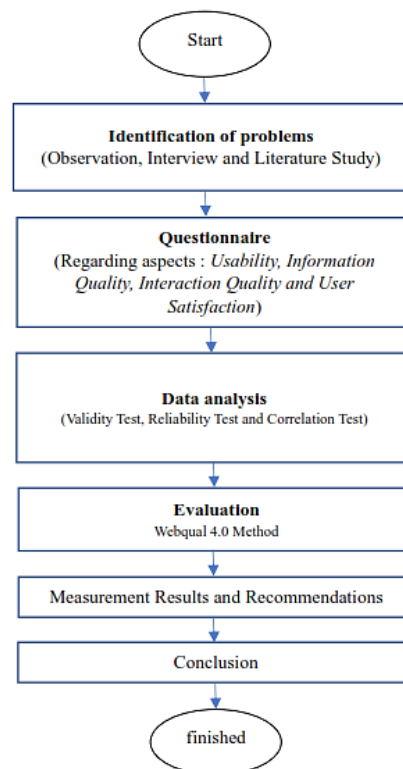


Figure 2. Research Flow

3. RESULTS AND DISCUSSION

3.1. Display of the SISKAPERBAPO website

The UI display below is the SISKAPERBAPO website display. Figure 3 is the information homepage of the SISKAPERBAPO website which informs the average price of foodstuffs including rice, onions, sugar and others in the East Java province. Figure 4 is a Table menu display consisting of Consumer Prices (per Area), Consumer Prices (per Commodity) and Producer Prices. In this Table menu you can see updated food price data for each province of East Java. Figures 5 and 6 are graphical growth displays and show the amount of stock in each city in the East Java Province. Furthermore, Figures 7 and 8 explain the trend function of the use of food needs that are frequently used and you can see price updates every day.

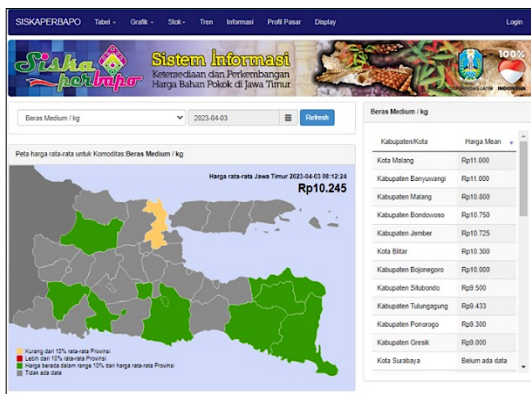


Figure 3. Website homepage

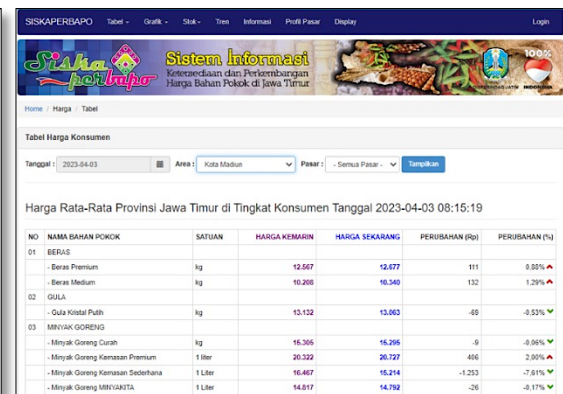


Figure 4. Consumer Prices

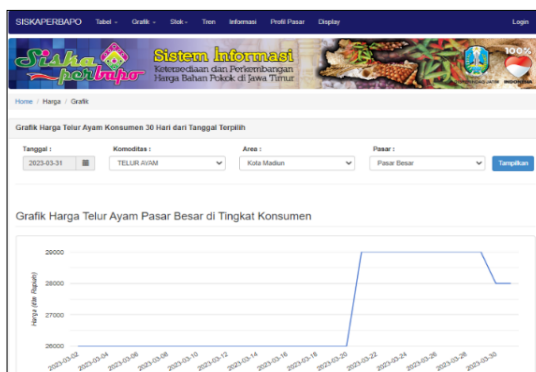


Figure 5. Price Chart (Category)

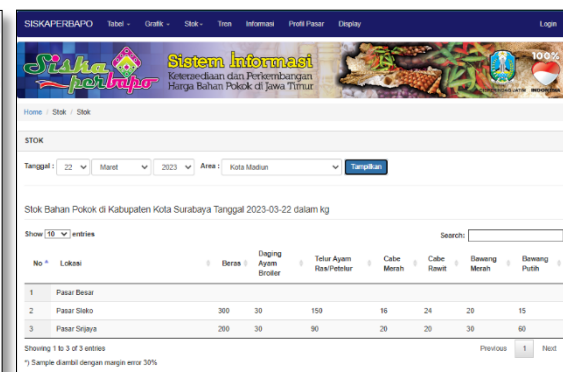


Figure 6. Stock of Staples (Area)

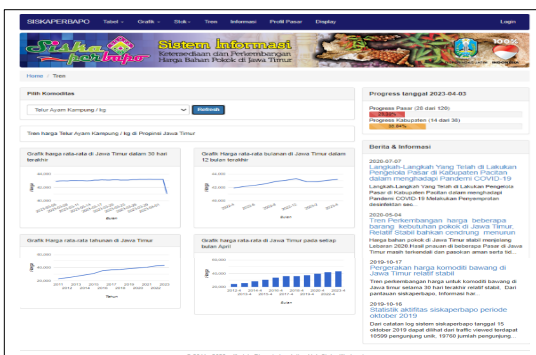


Figure 7. Price Trends (Category)

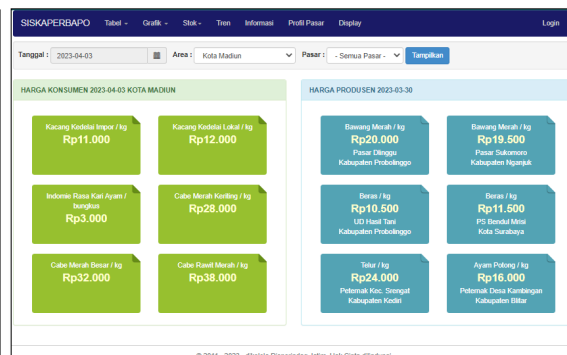


Figure 8. Price List (Day)

3.2. Data Analysis Results

The validity and reliability of this study were evaluated by conducting it on 57 participant questionnaire data. The findings of the validity and reliability tests conducted on 57 samples are listed below.

1. Validity Test

The fact that there were 57 respondents to the questionnaire made it possible to judge its validity. The Degree of Freedom (df) obtained from the number of respondents is reduced by 2 ($df = N - 2$) to obtain r . The Degree of Freedom used in this study is $df = 57 - 2 = 55$, with a level when r count is more than 0.05 and a significance of 5%, or 2.75, with r count > 0.334 the measuring instrument is declared valid and vice versa if r count < 0.334 then declared invalid.

2. Reliability Test

It can be concluded in Table 4 below that each variable in the Table above shows that > 0.60 and of the 23 question items in the questionnaire can be trusted because the results of the reliability test of the questionnaire on each of the 23 questions show that Cronback's Alpha > 0.60 .

Table 4. Reliability Test Results

Variable	Cronbach's Alpha	Description
Usability (US)	0,796	Reliabel
Information Quality (IQ)	0,845	Very Reliabel
Interaction Quality (SIQ)	0,844	Very Reliabel
User Satisfaction (USF)	0,832	Very Reliabel

3. Simple Correlation Test

Seen in Table 5, where in Table 6 it is at the level of a "Very Strong" positive connection, it means that the relationship between the US X1 and USF Y variables is unidirectional and has an r value of 0.820. There is a substantial relationship between US X1 and USF Y variables if the usability is very strong. This correlation is measured at the significance level (0.000 ± 0.05).

Table 5. Correlation Levels and Relationship Levels

No	Correlation Value r	Relationship Level
1	0,80 – 1,00	Very strong
2	0,60 – 0,799	Strong
3	0,40 – 0,599	Enough
4	0,20 – 0,399	Weak
5	0,00 – 0,199	Very weak

Table 6. US_X1 Correlation Test with USF_Y Correlations

		US_X1	USF_Y
US_X1	Pearson Correlation	1	.820**
	Sig. (2-tailed)		.000
	N	37	37
USF_Y	Pearson Correlation	.820**	1
	Sig. (2-tailed)	.000	
	N	37	37

The relationship between the variables IQ X2 and USF Y in Table 7 is unidirectional because it has $r = 0.657$ and meets the criteria for a "strong" positive relationship level. With a significance threshold (0.000 ± 0.05), it can be concluded that there is a substantial relationship between the variables IQ X2 and USF Y if the information quality is high.

Table 7. IQ_X2 Correlation Test with USF_Y Correlations

		IQ_X2	USF_Y
IQ_X2	Pearson Correlation	1	.657**
	Sig. (2-tailed)		.000
	N	37	37
USF_Y	Pearson Correlation	.657**	1
	Sig. (2-tailed)	.000	
	N	37	37

According to the connection level requirements in Table 5 is "Strong" positive, the relationship between the SIQ X3 and USF Y variables in Table 8 is unidirectional and has an r value of 0.732. There is a substantial relationship between the variables SIQ X3 and USF Y if the interaction quality is high. This correlation has a significance level (0.000 0.05) which indicates that it affects the level of user satisfaction.

Table 8. SIQ_X3 Correlation Test with USF_Y Correlations

		SIQ_X3	USF_Y
SIQ_X3	Pearson Correlation	1	.732**
	Sig. (2-tailed)		.000
	N	37	37
USF_Y	Pearson Correlation	.732**	1
	Sig. (2-tailed)	.000	
	N	37	37

3.3. Assessment based on the results of the questionnaire

The results of the responses from each respondent's response to the questionnaire question items that the researcher gave can be seen in Table 9 below based on the questionnaire that the researcher has collected, the following is the percentage data.

Table 9. Respondents' Responses (%)

No	Question	Description							
		STS		TS		S		SS	
		1	%	2	%	3	%	4	%
Usability									
1	The SISKAPERBAPO website is very easy to operate	2	3,4	0	0	32	55,2	24	41,4
2	The interaction between the SISKAPERBAPO Website and users is clear and easy to understand	1	1,7	1	1,7	26	44,8	30	51,7
3	The menu from the SISKAPERBAPO Website is easy to find	1	1,7	1	1,7	28	48,3	28	48,3
4	SISKAPERBAPO Website Design in accordance with the required website	1	1,7	1	1,7	30	51,7	27	46,6
5	Does the SISKAPERBAPO Website have an attractive appearance?	1	1,7	2	3,4	18	31	37	63,8
6	Do users find it easy to find the information they are looking for on the SISKAPERBAPO Website	1	1,7	0	0	26	44,8	31	53,4
Information Quality									
1	The information provided on the SISKAPERBAPO website is relevant	2	3,4	0	0	27	46,6	29	50
2	The SISKAPERBAPO website presents information that is easy to understand	1	1,7	1	1,7	21	36,2	35	60,3
3	The SISKAPERBAPO website provides complete and detailed information	1	1,7	1	1,7	26	44,8	30	51,7

4	The SISKAPERBAPO website provides timely information	0	0	1	1,7	31	53,4	26	44,8
5	The information provided on the SISKAPERBAPO website is relevant	0	0	2	3,4	24	41,4	32	55,2
6	The SISKAPERBAPO website presents information that is easy to understand	2	3,5	0	0	27	47,4	28	49,1
Interaction Quality									
1	The SISKAPERBAPO website has a good reputation	1	1,7	0	0	28	48,3	29	50
2	The SISKAPERBAPO website provides convenience in communicating with DISPERDAG	1	1,7	1	1,7	25	43,1	31	53,4
3	Information security for SISKAPERBAPO Website users is very good	2	3,4	0	0	30	51,7	25	44,8
4	I feel confident about the information provided by the SISKAPERBAPO Website	3	5,2	0	0	30	51,7	25	43,1
5	Does the Website provide space for discussion between SISKAPERBAPO Website users	2	3,4	0	0	27	46,6	29	50
6	The SISKAPERBAPO website presents information according to user needs	0	0	2	3,4	30	51,7	26	44,8
User Satisfaction									
1	I Feel Satisfied Using the SISKAPERBAPO Website	2	3,4	0	0	27	46,6	29	50
2	The SISKAPERBAPO Website Has a Structured and Consistent Layout	1	1,7	0	0	28	48,3	29	50
3	The SISKAPERBAPO Website Can Be Accessed Properly Using Gadgets	0	0	2	3,4	25	43,1	31	53,4
4	Switching access to the SISKAPERBAPO website from the main page to another page feels fast	1	1,7	2	3,4	25	43,1	31	53,4
5	I feel like the appearance of the SISKAPERBAPO website	2	3,4	1	1,7	30	51,7	25	43,1

After calculating the distribution of responses from respondents, the value interpretation will be calculated based on the questionnaire question items with a recapitulation of collecting questionnaire data totaling 57. Each question item will be calculated using a Likert scale on the questionnaire used.

Table 10. Percentage Interpretation Scale

0% - 20%	21% - 40%	41% - 60%	61% - 80%	81% - 100%
Very Weak	Weak	Moderately	Strong	Very Strong

The calculation as a determinant of the percentage results from the interpretation of the total research score is as follows :

$$IS = \frac{\text{Total Research Score}}{\text{Ideal Score}} \times 100\% \dots\dots\dots(i)$$

Information :

Total research score → respondent's answer x weight value (1-4)

Ideal score → Highest value scale (4) x number of respondents 57

Table 7 below shows the quality evaluation and explanation of each indicator on each questionnaire item.

Table 11. Quality Evaluation

Variable	Indicator	Code	Value (%)	Interpretation
Usability	The SISKAPERBAPO website is very easy to operate	US1	76,35%	Strong
	The interaction between the SISKAPERBAPO Website and users is clear and easy to understand	US2	64,18%	Strong
	The menu from the SISKAPERBAPO Website is easy to find	US3	81,75%	Very Strong
	SISKAPERBAPO Website Design in accordance with the required website	US4	80,40%	Strong
	Does the SISKAPERBAPO Website have an attractive appearance?	US5	80,40%	Strong
	Do users find it easy to find the information they are looking for on the SISKAPERBAPO Website	US6	70,90%	Strong

Information Quality	The information provided on the SISKAPERBAPO website is relevant	IQ1	69,59%	Strong
	The SISKAPERBAPO website presents information that is easy to understand	IQ2	74,32%	Strong
	The SISKAPERBAPO website provides complete and detailed information	IQ3	72,29%	Strong
	The SISKAPERBAPO website provides timely information	IQ4	74%	Strong
	The information provided on the SISKAPERBAPO website is relevant	IQ5	67,56%	Strong
Interaction Quality	The SISKAPERBAPO website presents information that is easy to understand	IQ6	70,27%	Strong
	The SISKAPERBAPO website has a good reputation	SIQ1	79,05%	Strong
	The SISKAPERBAPO website provides convenience in communicating with DISPERDAG	SIQ2	66,21%	Strong
	Information security for SISKAPERBAPO Website users is very good	SIQ3	77,70%	Strong
	I feel confident about the information provided by the SISKAPERBAPO Website	SIQ4	77,70%	Strong
User Satisfaction	Does the Website provide space for discussion between SISKAPERBAPO Website users	SIQ5	60,81%	Enough
	The SISKAPERBAPO website presents information according to user needs	SIQ6	73,64%	Strong
	I Feel Satisfied Using the SISKAPERBAPO Website	USF1	71,07%	Strong
	The SISKAPERBAPO Website Has a Structured and Consistent Layout	USF2	71,78%	Strong
	The SISKAPERBAPO Website Can Be Accessed Properly Using Gadgets	USF3	78,46%	Strong
	Switching access to the SISKAPERBAPO website from the main page to another page feels fast	USF4	78,07%	Strong
	I feel like the appearance of the SISKAPERBAPO website	USF5	60,62%	Enough

The results of measuring service quality can be concluded from the Table above as follows :

1. Question US3 gets the highest score on the usability variable of 81.75 percent. This is because users find it easy to access the DISPERDAG website because the menu from the SISKAPERBAPO website is easy to find. This is supported by the features on the website, such as the appearance of the website menu which is placed in such a way as to make it easier for users to search for menus.
2. The highest value of the information quality variable, namely 75%, is on IQ4. This is because the SISKAPERBAPO website offers information that is easy to understand, and looking at the appearance of the website, this is clear. The website has a good layout making it easier to convey information according to the intended concept, and the display arrangement can accommodate both text and images on the website.
3. The SIQ1 question has a score of 79.05% on the interaction quality variable. This is because the SISKAPERBAPO website has a good reputation, as evidenced by the existence of factors that support this claim, such as the website's disclosure of public information which makes respondents believe that the website's reputation is good because it offers essential information.
4. USF3 has the largest score of 78.46% on the customer satisfaction variable. Because the SISKAPERBAPO website can be accessed properly via gadgets, people feel comfortable visiting this website using mobile phones and can be accessed anywhere and anytime to view and utilize the website. This results in a higher level of user satisfaction with the usability of the SISKAPERBAPO website

4. CONCLUSION

Based on the findings of the SISKAPERBAPO website service quality measurement. The results of the evaluation on the SISKAPERBAPO website state that the appearance of web design is the main thing that must be addressed even though the menu runs well, is easy to find, and is responsive on mobile phones, but users want a neater appearance and an up-to-date design.

REFERENCES

- [1] S. S. Barnes and R. Vidgen, "WebQual: An Exploration of Website Quality Recommended Citation WebQual: An Exploration of Web-site Quality," *Eur. Conf. Inf. Syst.*, pp. 1–9, 2000, [Online]. Available: <http://aisel.aisnet.org/ecis2000/74>
- [2] J. Hasanov and H. Khalid, "The Impact of Website Quality on Online Purchase Intention of Organic Food in Malaysia: A WebQual Model Approach," *Procedia Comput. Sci.*, vol. 72, pp. 382–389, 2015, doi: 10.1016/j.procs.2015.12.153.
- [3] G. S. A. Khalifa, "Assessing e-Service Quality Gap within Egyptian Hotels via WEBQUAL Technique," *Artech J. Tour. Res. Hosp.*, vol. 1, no. 1, pp. 13–24, 2020, [Online]. Available: <https://www.researchgate.net/publication/343194009>
- [4] S. Sriyono, O. S. Simanjuntak, R. P. Agusdin, and S. P. Tahalea, "A Measuring Satisfaction of Member UPN Veteran Yogyakarta Cooperative Whatsapp Group: Webqual 4.0 Model Adoption," *RSF Conf. Ser. Eng. Technol.*, vol. 1, no. 1, pp. 603–609, 2021, doi: 10.31098/cset.v1i1.436.
- [5] R. R. Rerung, M. Fauzan, and H. Hermawan, "Website Quality Measurement of Higher Education Services Institution Region IV Using Webqual 4.0 Method," *Int. J. Adv. Data Inf. Syst.*, vol. 1, no. 2, pp. 89–102, 2020, doi: 10.25008/ijadis.v1i2.185.
- [6] S. Kim and L. Stoel, "Dimensional hierarchy of retail website quality," *Inf. Manag.*, vol. 41, no. 5, pp. 619–633, 2004, doi: 10.1016/j.im.2003.07.002.
- [7] F. Muttakin, D. Dwi Aprillia, and M. Kumalasari, "Analisis Pengaruh Kualitas Layanan Website Terhadap Pengguna Akhir Menggunakan Webqual 4.0," *J. CoSciTech (Computer Sci. Inf. Technol.)*, vol. 3, no. 3, pp. 300–308, 2022, doi: 10.37859/coscitech.v3i3.4403.
- [8] M. Kartika, A. Utomo, and J. J. C. Tambotih, "Analisis Kepuasan Pengguna Pada Website Registrasi Pendakian Taman Nasional Gunung Merbabu dengan Metode Webqual 4.0," vol. 10, no. 1, pp. 276–286, 2023, doi: 10.30865/jurikom.v10i1.5814.
- [9] M. L. Jundillah, J. E. Suseno, and B. Surarso, "Evaluation of E-learning Websites Using the Webqual Method and Importance Performance Analysis," *E3S Web Conf.*, vol. 125, no. 201 9, pp. 1–5, 2019, doi: 10.1051/e3sconf/201912524001.
- [10] V. A. Durova and N. Amin, "Using webqual 4.0 in the evaluation of the russian B2C cosmetic web sites," *WEBIST 2009 - Proc. 5th Int. Conf. Web Inf. Syst. Technol.*, no. Webist, pp. 585–588, 2009, doi: 10.5220/0001843205850588.
- [11] R. Pamungkas and S. Saifulloh, "Evaluasi Kualitas Website Program Studi Sistem Informasi Universitas PGRI Madiun Menggunakan Webqual 4.0," *INTENSIF J. Ilm. Penelit. dan Penerapan Teknol. Sist. Inf.*, vol. 3, no. 1, p. 22, 2019, doi: 10.29407/intensif.v3i1.12137.
- [12] M. A. Shianto, Sudirman, and Afifah, "ANALISIS KUALITAS LAYANAN WEBSITE ROOM MENGGUNAKAN METODE WEBQUAL DAN IMPORTANCE-PERFORMANCE ANALYSIS," *J. KHARISMA Tech*, no. 01, pp. 1–15, 2023.
- [13] P. Palipi, E. Rajaguguk, M. Aritionang, M. Yohanna, and Y. Y. Rumapea, "Pengukuran Kualitas Layanan Website Dengan Metode Webqual (Studi Kasus: Sistem Informasi Akademik Universitas Methodist Indonesia)," *Methodisfo J. Ilm. Sist. Inf.*, vol. 2, no. 2, pp. 60–70, 2022, [Online]. Available: <https://ojs.fikom-methodist.net/index.php/methodisfo/article/view/63>
- [14] I. Salamah, L. Lindawati, M. Fadhli, and R. Kusumanto, "Evaluasi Pengukuran Website Learning Management System Polsri Dengan Metode Webqual 4.0," *J. Digit.*, vol. 10, no. 1, p. 1, 2020, doi: 10.51920/jd.v10i1.151.
- [15] 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, p. 23, 2019, doi: 10.20473/jisebi.5.1.23-31.
- [16] I. S. Utami, Winarno, and H. Setiadi, "Analysis the Effect of Website Quality on User Satisfaction with the WebQual 4.0 Method and Importance-Performance Analysis (IPA) (Case Study: SPMB Sebelas Maret University's Website)," *J. Phys. Conf. Ser.*, vol. 1842, no. 1, pp. 1–8, 2021, doi: 10.1088/1742-6596/1842/1/012003.
- [17] R. A. Nugraha, D. Andriyanto, D. Riana, and S. N. Khasanah, "Analysis of Factors Affecting Quality of corona.jatengprov.go.id Website towards User Satisfaction using Webqual 4.0 Method," *J. Phys. Conf. Ser.*, vol. 1641, no. 1, pp. 1–6, 2020, doi: 10.1088/1742-6596/1641/1/012066.
- [18] N. M. Nusairat *et al.*, "Avoiding uncertain buying intentions: Does WebQual matter?," *Int. J. Data Netw. Sci.*, vol. 7, no. 1, pp. 425–432, 2023, doi: 10.5267/j.ijdns.2022.9.004.
- [19] 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, doi: 10.26594/register.v7i2.2266.
- [20] N. Hidayat, L. Afuan, S. Nurhayati, and Y. I. Kurniawan, "Evaluation of The Universitas Jenderal Soedirman E-Learning Website (Eldiru) Using The Webqual 4.0 Method," *3rd Int. Conf. Eng. Technol. Innov. Res.*, vol. 100002,

- no. January, pp. 1–8, 2023.
- [21] A. Faza and A. P. Utomo, “Analisa Kualitas Layanan Website PT. Masusskita United Menggunakan Metode Webqual,” *J. Tekno Kompak*, vol. 15, no. 2, p. 88, 2021, doi: 10.33365/jtk.v15i2.1155.
- [22] M. I. Idharuddin and D. R. Prehanto, “Analisis Kualitas Layanan Dan Perancangan Website PT. Pelabuhan Indonesia III Menggunakan Metode Webqual,” *Jeisbi*, vol. 2, no. 1, pp. 32–39, 2021, [Online]. Available: www.pelindo.co.id.