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EVALUATING THE QUALITY OF INFOLOKER KAB.KARAWANG WEBSITE USING WEBQUAL 4.0 METHOD

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Abstract

Technology has provided new methods of presenting the information. Information can be easily accessed anywhere and anytime. One of the Regional Governments of Indonesia takes this advantage by creating an information system called InfoLoker Kab. Karawang to make it easier for citizens to find job vacancies. Of this importance, it interests researchers to conduct a study to evaluate the website's quality based on the dimensions of the WebQual 4.0 method. WebQual is a method for measuring a website's quality based on the end user's point of view. The data source is taken from InfoLoker Kab. Karawang website users through a survey method with a sample of 118 respondents and data analysis using SmartPLS. According to the discussion results, the quality of the InfoLoker Kab. Karawang's website was good, with ratings of 73.3%, 74.3%, and 62.2% for the dimensions of usability, information quality, and service interaction quality, accordingly. Overall user satisfaction is significantly impacted by the quality of the information and service interactions, but not by usability because usability's t-value is under 0.96. However, the website's quality can still be improved, particularly in the service interaction dimension, by improving the security of the user's personal information because even though the service interaction quality dimension significantly influences user satisfaction, it has the lowest quality score.

Keywords: *InfoLoker Kab.Karawang, Website's Quality, WebQual 4.0, SmartPLS.*

1. PRELIMINARY

Technology has driven new ways of presenting information. Through technology, information can be easily accessed anywhere and anytime. This is very beneficial for organizations, both government and private companies. One of the Media that presents information for the organization is the website. A website is an essential tool for a firm to establish a strong online presence because it combines informative, relational, and transactional functionalities with online commercial transactions [1]. Nowadays, almost all government agencies have used the website as a medium for presenting their information. One of the Regional Governments of Indonesia has taken this technological advantage and through its Department of Manpower and Transmigration has created an information system called InfoLoker Kab. Karawang aims to support villagers find job opportunities. The website includes a lot of data relating to career opportunities as well as details about the skills required by a worker. Furthermore, this platform connects companies and job seekers.

WebQual 4.0 is a popular approach for measuring the quality of a website. Barnes and Vidgen initially introduced and developed the WebQual method by testing it in the domain of UK business schools, [2], which then continued to be developed into various versions of WebQual. And some previous research using Webqual has been done by Morimura et al, who analyzed the factors that contribute to website quality ratings for online tourism services in terms of intention to use and recommend for different levels of consumer experience [3]. WebQual has also been used by Hasanov and Khalid to assess the quality of organic food shopping websites in Malaysia based on user

perceptions and has shown that the quality of the website indirectly affects the intention to purchase organic food products [4]. So as Rita et al, have combined WebQual with E-S-Qual, and eTailQ to measure and develop new knowledge to better understand the most important dimensions of e-service quality that have an impact on customer satisfaction, customer trust, and customer behavior, building on existing literature on e-service quality in online shopping [5]. Likewise, Pathania and Rashool who have used the WebQual scale in their study about investigating e-tailers' perceived website quality. They used three of WebQual dimensions to define the instrument of their study [6]. Similarly, [7] research, determine the level of website quality based on the WebQual 4.0 dimension using a criterion score to determine the quality of the study's results, as well as [8] modifying WebQual to assess website quality and its usefulness.

Referring to previous research above and seeing how important the InfoLoker Kab. Karawang website is, makes researchers interested in conducting research to evaluate the quality of the InfoLoker Kab. Karawang's website is based on the WebQual 4.0 dimensions hoping can provide an overview of the quality of the InfoLoker Kab. Karawang website. For designing an effective website, it is required to identify the need of the visitors of the website [9]. So, the results of this study aim to use the related regional government as a reference to improve the quality of the InfoLoker Kab. Karawang's website is based on its users' experience which will be specifically evaluated based on the WebQual dimensions. Therefore, consistency in maintaining a website's quality is needed to attract its users' interest, including government agency websites.

2. RESEARCH METHODS

The research method uses quantitative descriptive verification with WebQual 4.0 approach. According to WebQual theory, the dimensions that reflect excellent quality from a website include usability, information quality, and service interaction. A user's perception of a "good" information system is one in which the user is happy with the website's qualities. WebQual version 4.0 represents these properties in three dimensions [10]. Following below is the conceptual model of this research.

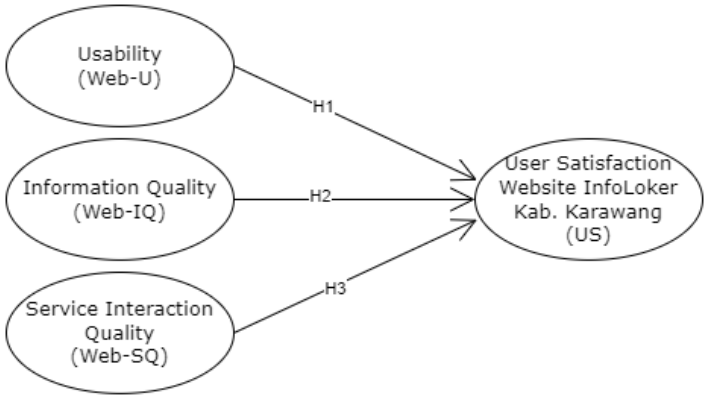

***Image 1**. Conceptual Model for User Satisfaction Using WebQual [10]*

Based on the conceptual model above, the hypothesis of this study is:

H1: On the InfoLoker Kab. Karawang website, the usability variable (Web-U) is predicted to significantly impact user satisfaction (US).

H2: On the InfoLoker Kab. Karawang website, the information quality variable (Web-IQ) is predicted to significantly impact user satisfaction (US).

H3: On the InfoLoker Kab. Karawang website, the service interaction quality variable (Web-SQ) is predicted to significantly impact user satisfaction (US).

This study was conducted in stages, including problem identification, study literature, determining research method, arranging research instruments, data collection, Analysis, discussion, and conclusion shown in Image 2.

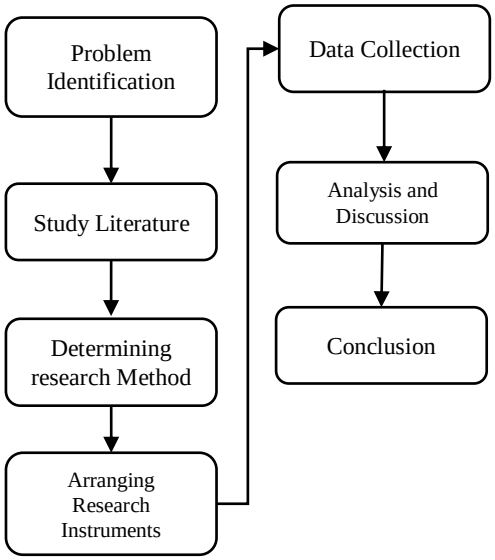

Image 2. *Methodology of Research*

2.1. Problem Identification

The focus of problem identification is to identify the issue by researching what actually happened. The study will focus on the impact of usability, information quality, service interaction, and overall quality on the InfoLoker website's quality to improve it based on user perceptions.

2.2. Study Literature

The study literature is needed to understand the InfoLoker website, the Webqual 4.0 method, and research-related questionnaires. Journals, scientific articles, websites, and related research were used to gather the literature review.

2.3. Arranging Research Instruments

This study's instrument is a questionnaire form based on the WebQual 4.0 dimensions. A list of research instruments is provided in Table 1 below.

Table 1. *List of Research Instruments*

Dimensions	***Indicators***	***Item Statements***		***Sources***
Usability **(U)**	Easy to Use	U1.	Website InfoLoker Kab. Karawang is easy to learn	[11]
		U2.	I find the InfoLoker Kab. Karawang is easy to use	
	Web Design	U3.	The design is appropriate to the type of site	
		U4.	Website InfoLoker Kab. Karawang conveys a sense of competency	
Information Quality **(IQ)**	Information Accuracy	IQ1.	Website InfoLoker Kab. Karawang provides accurate information	
	Information Clarity	IQ2.	Website InfoLoker Kab. Karawang provides believable information	
		IQ3.	Website InfoLoker Kab. Karawang provides timely information	
	Information relevance	IQ4.	Website InfoLoker Kab. Karawang provides relevant information	
	Ease-to-	IQ5.	Website InfoLoker Kab. Karawang	

Dimensions	*Indicators*	*Item Statements*		*Sources*
	understand		provides easy-to-understand information	
	Updating information	IQ6.	Website InfoLoker Kab. Karawang provides information at the right level of detail	
		IQ7.	Website InfoLoker Kab. Karawang has presented the information in an appropriate format	
Service Interaction Quality **(SQ)**	Reputation	SQ1.	Website InfoLoker Kab. Karawang has a good reputation	
	Security	SQ2.	I feel safe when interacting with the InfoLoker Kab. Karawang website	
		SQ3.	My personal information feels secure	
	Service trust	SQ4.	I feel confident that goods/services will be delivered as promised	
User Satisfaction **(US)**	Overall impression	US1.	I am satisfied with the quality of the InfoLoker Kab. Karawang website	[12]
		US2.	I will recommend friends use the InfoLoker Kab. Karawang website	[10]

2.4. Data Collection

The data used in this study came from respondents who met various criteria, including being over the age of 17 and at least once having used the Infoloker Kab. Karawang website. Several previous studies [13], [14] have used the Bernoulli formula to compute sample size from a population whose size is unknown with certainty. So, the researcher used that formula to get the minimum sample for this study. The data was collected using a Google Forms-created online survey with a Likert scale for measurement scale, the variables to be measured are transformed into variable indicators ranging from 1 to 5 which signified strongly disagree to strongly agree. To make it easy for researchers for collecting data, this questionnaire was distributed through social media such as Facebook, Whatsapp, Telegram, and other social media. Then, 118 samples of data were collected.

2.5. Data Analysis

Using the SmartPLS version 4.0.9.2 and the Structured Equation Model-Partial Least Square (SEM-PLS) approach, the data is processed to ensure that the data collected is valid and reliable which also makes it easier to do hypothesis testing. Next, evaluate how much of quality of the website based on WebQual 4.0 dimensions using criterion scores to determine the quality of the research results. According to [7], [8], this criterion score can be used to assess data from questionnaires that include a Likert scale and a rating scale.

3. RESULT AND DISCUSSION

The Results and Discussion section contains the results of the research as well as a thorough discussion of each result obtained from the research discussed. Provide a detailed discussion of the results obtained so that they can answer the problems mentioned in the Introduction section.

3.1. Demographics Characteristics of Respondents

Based on data collection the respondents were dominated by females with 63.56% or as many as 75 people instead of males which 36.44% of respondents or just 43 people with 56.78% in the range 17 to 23 years old and 43.22% between 24 and 30 years old. Also, the respondents were those with the last level of education from high school with 83 respondents whereas a bachelor's degree or S1/D4 has 19 counts of respondents, a diploma or D3/D2/D1 with 13 respondents, and the other 3 didn't give reactions. In addition, 33.05% of all respondents had received a job offer or interview, while the other 66.95% had never

3.2. Descriptive Analysis

In addition to measuring the impact of the independent variable on the dependent variable, in this study, the quality of the dimensions will also be measured. The criterion score for the WebQual 4.0 dimensions is calculated in order to grade the Infoloker website's quality which are usability, information quality, and service interaction quality. The recapitulation results of respondents' answers for dimensions are as follows.

Table 2. *Usability's Criterion Score*

Response Scale (S)	*Item Statements*				*Frequency (F)*	*Score (S x F)*
	U1	*U2*	*U3*	*U4*		
1	0	0	2	0	2	2
2	3	3	3	8	17	34
3	36	25	42	52	155	465
4	69	79	61	51	260	1040
5	10	11	10	7	38	190
Total	118	118	118	118	472	**1731**

According to the table above, the overall score for the Usability variable is 1731. The classification is based on the score range in which:

1. The maximum score is determined by multiplying 5 (highest score) by the number of statement items multiplied by the number of respondents, i.e. 5 x 4 x 118 = 2360
2. The lowest score is determined by multiplying 1 (lowest score) by the number of statement items multiplied by the number of respondents, i.e. 1 x 4 x 118 = 472

Based on this score range, the level of grouping of respondents' assessment of the Usability of the Infoloker website results, as shown on a continuum line as follows:

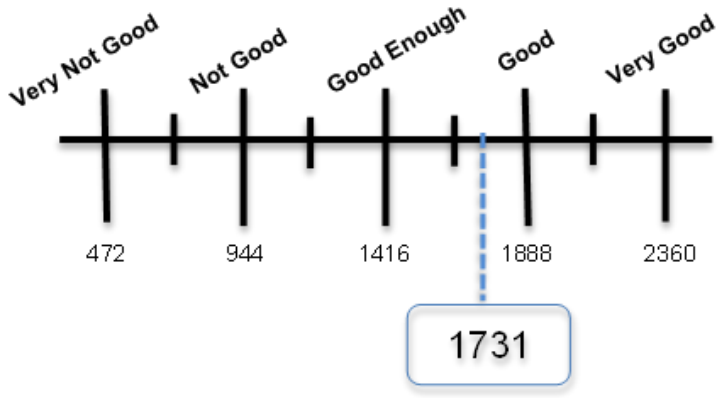

Image 3. *Range of Usability Test Score*

So, based on the assessments of 118 respondents, the Usability dimension score of 1731 comes into the "good enough and good" interval (1416-1888). Then the percentage value is obtained by dividing the total score by the maximum score (according to [7]) so that a percentage of 73.3% is obtained. It can be interpreted that the InfoLoker Kab. Karawang website's usability is "Good," as it is within the quality score range of 1416-1888, or 73.3%.

Table 3*. Information Quality's Criterion Score*

Response	*Item Statements*	*Frequency*	*Score*

Scale (S)	*IQ1*	*IQ2*	*IQ3*	*IQ4*	*IQ5*	*IQ6*	*IQ7*	*(F)*	*(S x F)*
1	0	0	1	0	1	1	0	3	3
2	1	2	3	4	1	5	4	20	40
3	43	45	36	33	36	49	42	284	852
4	62	57	68	63	65	48	58	421	1684
5	12	14	10	18	15	15	14	98	490
Total	118	118	118	118	118	118	118	826	**3069**

The information quality variable has an overall score of 3068 based on the table above. Additionally, using the same approach previously with a total item statement of 7, the highest score is 4130, while the lowest is 826. Therefore, the following level of grouping represents how respondents evaluated the information quality of InfoLoker Kab. Karawang website:

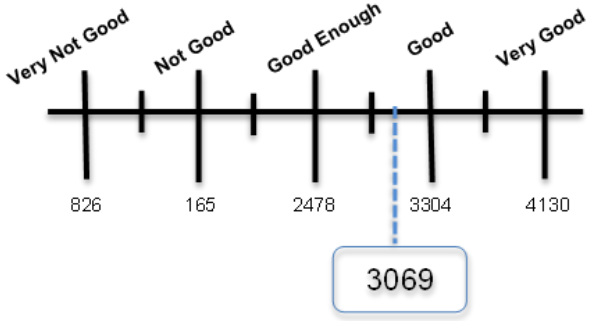

Image 4. *Range of Information Quality Test Score*

As a result, according to Chart 2, the information quality dimension score of 3069, with an acquired percentage of 74.3%, comes within the "good enough and good" interval (2478-3304). It means the information quality of the InfoLoker Kab. Karawang website is "Good," as it is within the 2478-3304 quality score range, or 74.3%.

Table 4. *Service Interaction Quality's Criterion Score*

Response Scale (S)	*Item Statements*				*Frequency (F)*	*Score (S x F)*
	SQ1	*SQ2*	*SQ3*	*SQ4*		
1	1	1	2	1	5	5
2	15	5	21	17	58	116
3	81	81	66	79	307	921
4	16	25	24	18	83	332
5	5	6	5	3	19	95
Total	118	118	118	118	472	1469

Based on the table above, the service interaction quality variable has an overall score of 1469. Additionally, using the same approach before and a total item statement of 4, the highest score is 2360, while the lowest is 472. Therefore, the following level of grouping represents how respondents evaluated the service interaction quality of InfoLoker Kab. Karawang website.

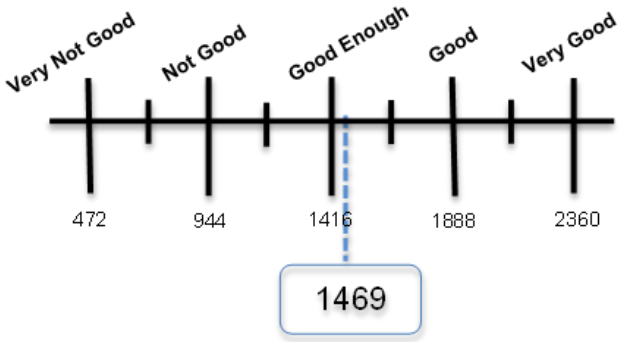

Image 5. *Range of Service Interaction Quality Test Score*

As a result, the service interaction quality dimension score of 1469, with an acquired percentage of 62.2%, comes within the "good enough and good" interval (1416-1888), according to Chart 3. Because it is closer to 1416, the InfoLoker Kab. Karawang website's service interaction quality is "Good Enough" or 62.2%.

The results of this analysis are consistent with those of a study (Ibrahim et al., 2020) that applied the same computational method to WebQual 4.0's dimensions. Ibrahim's research found that usability, interaction, and service interaction quality all scored good average scores. Based on this and several previous studies, the dimensions of WebQual can be relied upon to answer research questions regarding website quality.

3.3. Inferential Analysis

The inferential analysis begins with a measurement model test. Validity and reliability tests for the measurement model were performed. Outer loadings of the indicator and average variance extracted (AVE) to evaluate convergent validity, cross-loadings and the Fornell-Larcker criterion can be used to assess discriminant validity, and composite reliability to assess the reliability [15].

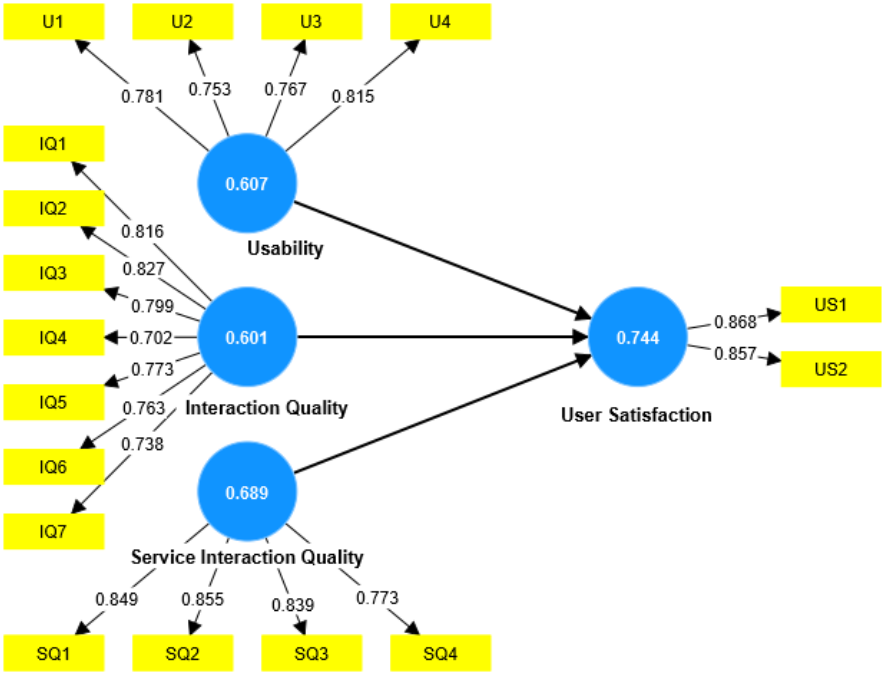

Image 6. *Visualization of Outerloading and AVE test using SmartPLS*

According to Image 3, it can be concluded that the questionnaire items for each variable met the criteria for convergent validity because they have loading values greater than 0.7 and an AVE value greater than 0.5 for each variable. As a result, and according to [15] all indicators in the research variables can be regarded as valid.

Table 5. *Fornell-Larcker Criterion Analysis*

	Interaction Quality	***Service Interaction Quality***	***Usability***	***User Satisfaction***
Interaction Quality	0.775			
Service Interaction Quality	0.459	0.83		
Usability	0.562	0.35	0.779	
User Satisfaction	0.485	0.493	0.438	0.862

Table 6. *Cross-Loading Analysis*

	Information Quality	***Service Interaction Quality***	***Usability***	***User Satisfaction***
IQ1	0.816	0.396	0.501	0.472
IQ2	0.827	0.448	0.454	0.496
IQ3	0.799	0.313	0.437	0.311
IQ4	0.702	0.236	0.324	0.312
IQ5	0.773	0.354	0.495	0.368
IQ6	0.763	0.37	0.333	0.262
IQ7	0.738	0.317	0.464	0.289
SQ1	0.384	0.849	0.331	0.461
SQ2	0.398	0.855	0.345	0.396
SQ3	0.299	0.839	0.232	0.35
SQ4	0.427	0.773	0.241	0.412
U1	0.508	0.179	0.781	0.307
U2	0.476	0.207	0.753	0.256
U3	0.329	0.257	0.767	0.333
U4	0.457	0.395	0.815	0.428
US1	0.319	0.567	0.29	0.868
US2	0.521	0.278	0.468	0.857

According to Table 5, the square root of the AVE for each construct is greater than its correlation with any other construct. As well as table 6 shows that the correlation between an item questionnaire and the variable itself is greater than the correlation between an item questionnaire and another variable. As a result, and according to [16] all of the study's variables have been considered valid.

As previously mentioned, the composite reliability value can be used to measure the reliability of a construct or variable. Composite reliability should be higher than 0.70 [15]. The following is the value of composite reliability in this study:

Table 7. *Composite Reliability Analysis*

	Composite reliability
Interaction Quality	0.913
Service Interaction Quality	0.898
Usability	0.861
User Satisfaction	0.853

Based on the table above, all the variables used in this study are reliable because all composite reliability is higher than 0.70.

Additionally, bootstrapping uses 5000 sub-samples to evaluate the path coefficients to assess the significance of the effect between latent variables at a significance level of 0.05. The t-table reference value with a significance level of 5% for two-tailed is 1.96. Path coefficients are deemed significant when the t-statistical is more than 1.96; when it is lower than 1.96, they are considered insignificant [15]. The hypothesis is then accepted if the path coefficients are determined to be significant and rejected if they are shown to be insignificant. Following are the hypothesis test results using correlation coefficients and T-statistical analyses.

Table 8. *Path Coefficients & T-Statistic Analysis Result*

	Description	***Original sample***	***T statistics***	***Hypothesis***
H1	Usability => User Satisfaction	0.198	1.738	Rejected
H2	Interaction Quality => User Satisfaction	0.227	2.005	Accepted
H3	Service Interaction Quality => User Satisfaction	0.319	2.766	Accepted

According to the t-statistical analyses table above, a t-value of H1 meets 1.738, it is smaller than 1.96. So, an H1 is rejected, and it can be interpreted that usability does not significantly impact to satisfaction of InfoLoker Kab. Karawang web users.

Next, the test results on H2 show that the relationship between interaction quality and user satisfaction is significant. With a t-value of 2.005, it is greater than 1.96. So, a hypothesis is accepted, and it can be interpreted that interaction quality significantly impacts user satisfaction.

Likewise, H3, the test results show that the relationship between service interaction quality and user satisfaction is significant. With a statistical t-value of 2.766 greater than 1.96. So, the hypothesis is accepted and it can be interpreted that service interaction quality significantly impacts to satisfaction of InfoLoker Kab. Karawang web users.

4. CONCLUSION

Based on the data analysis and processing findings, the quality of the Infoloker Kab. Karawang's website is good. The percentage of quality for information quality is 74.3% and falls into the "good" category and significantly influences overall user satisfaction as seen from its t-value of > 0.96, 2.005, it shows the information quality including accuracy, clarity, relevance, and easy-to-understand information so as to obtain the highest quality value and significantly affect satisfaction.

Meanwhile, the dimension of service interaction quality has the lowest quality percentage score of 62.2% and falls into the "good enough" category. However, it still significantly affects overall user satisfaction because it has a t-value >0.96, 2,776. This shows that the service interaction quality, including a sense of security and website reputation, are not as good as information quality, but still influence overall user satisfaction.

And so, usability is of "good" quality with a quality percentage of 73.3% but insignificantly influences overall user satisfaction because it has a t-value < 0.96. this is possible because we saw the respondents are between 17 to 30 years old and are active users of the internet which affects internet

proficiency so the ease of accessing the Infoloker Karawang website does not have a significant effect on the satisfaction of the website's users.

However, the quality of the Infoloker Kab. Karawang's website can be improved, especially on the dimension of service interaction quality. Because out of 118 respondents, 21 disagreed and 2 strongly disagreed with the statement item "My personal information feels safe". This shows that around 19.5% of respondents feel insecure when using the Infoloker Karawang website. This may be of more concern to the relevant government which has authority over websites to improve service quality, particularly for user safety.

So, the suggestion for further research is to expand the age range of respondents in the hope of gaining insight into whether usability can affect website user satisfaction if the respondent is over the age of 30

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