Analysis of User Satisfaction on Corona.Jakarta.go.id Website: Use Webqual Method 4.0

Fakihotun Titiani¹, Erni², Dwiza Riana³*, Cahyani Budihartanti⁴, Syaifur Rahmatullah⁵ and Taransa Agasya Tutupoly⁶
¹, ², ³, ⁴, ⁵, ⁶ Computer Science Magister, STMIK Nusa Mandiri, Jakarta

E-mail: dwiza@nusamandiri.ac.id

Abstract. The Corona.jakarta.go.id website is a website owned by the Jakarta city government as a provider of information related to Covid-19, the website contains data on the distribution of Covid-19 throughout Indonesia and specifically Jakarta, as well as appeals to the public and other information for overcoming Covid-19 in Indonesia. Indonesia is experiencing a pandemic Corona Virus or Covid-19, many websites are built as a form of government contribution to the response of Covid-19. As one of the websites which is a place for information related to Covid-19, of course many people access the website, with the information presented on the website, the website user satisfaction research is carried out by distributing questionnaires to the public. From the description of the problem, a Corona.jakarta.go.id website quality measurement is carried out using the Webqual 4.0 method whose aim is to find out the Webqual variables that affect user satisfaction, from the Webqual 4.0 indicators what needs to be improved for and provide recommendations improvement. Based on the results of a survey of 109 respondents obtained the value of R square for the variable user satisfaction by 0.448 or 44.8% through linear relationships, while the value of the remaining 0.552 or 55.2%, influenced by other variables outside this study.

1. Introduction
Distribution of information and data no longer knows the time limit, place, region and country. All can be accessed online without a separation wall and can be done by everyone as long as they are connected to the internet [1]. Almost all local governments in Indonesia have websites but different quality and roles [2]. The website is now used by the local government as a media in carrying out e-Government goals. E-Government covers all uses of information technology by government agencies both internet-based and mobile computing that have the ability to establish good relations with the community, business people and other parties [1].

The role of the Government of its website is as a manager, regulator, controller and supervisor by providing any news that is up to date so that the public can get information anywhere, anytime. The Corona.jakarta.go.id website is a website owned by the Jakarta city government as a provider of information regarding Covid-19, the website contains data on the distribution of Covid-19 throughout Indonesia and specifically Jakarta, as well as appeals to the public and other information for overcoming Covid-19 in Indonesia.

Indonesia is experiencing a pandemic Corona Virus or Covid-19, a lot of websites are built as a form of government contribution to the handling of Covid-19. As one of the websites that becomes a forum for information regarding Covid-19, of course many people access the website,
Website quality has become one of the strategic issues in communication and transactions with customers[3]. Quality measurement on a website using the Webqual 4.0 method is carried out by web users as a benchmark to find out how web managers adjust users' perceptions. In addition, the use of the Webqual method has been used in several studies and it is proven that the results of the analysis using the Webqual method affect the quality of service on a website[4]. Similar research has been carried out by previous researchers, that the Jagalempeni Village website today in terms of Usability Quality, Information Quality, and Visual Quality already has good quality, while in terms of Service Interaction Quality it does not yet have good quality, due to user satisfaction (user satisfaction) unfulfilled [1].

This study aims to measure the quality of the Corona.jakarta.go.id website whose judgment is based on the end-user perception. Measurement of website quality by using Webqual 4.0 can help website managers adjust website quality according to the user's website perception. The results of this study will contribute to find out the quality of the website from the assessment based on the quality of usability, information, service interactions, which influences and does not affect user satisfaction and results for recommendations in website development to be better.

2. Methodology
Consumer satisfaction means that the client’s conviction of the likelihood of an assistance prompting a positive inclination. As indicated by Kotler and Keller (2006), consumer satisfaction is the result of client encounters during the purchasing procedure, and it assumes an essential job in influencing client future conduct, for example, online repurchase and loyalty[5]. Webqual is the development of SERVQUAL that was widely used before in measuring functional service quality[6]. Webqual 4.0 is a method used to measure the quality of a website to user satisfaction by measuring the quality of information, usability, quality of service interaction and overall assessment[7]. PLS is a SEM method that needs to be corrected repeatedly that maximizes the clarified variant of endogenous development. Not at all like CB-SEM, which means to approve a theory by determining, whether a model, can debate covariance for data samples of information information, PLS-SEM works like multiple regression analysis[8]. Partial Least Square (PLS) is a variance-based structural equation analysis (SEM) that can simultaneously test measurement models as well as structural models[9].

This research was conducted to measure the quality of the Official Media Website for Emerging Infection (Corona.jakarta.go.id) owned by the Ministry of Health of the Republic of Indonesia from the perception of website users using quantitative descriptive research. Quantitative methods are methods that can be used for surveys to get data that has been done in the past or present about opinions, behaviors, beliefs for hypothesis research. Using survey techniques to obtain primary data by distributing questionnaires using google forms as an assessment of the quality of the website. Determination of the sample or respondent using random sampling techniques and distributing questionnaires online to ensure quality is that respondents have linked the link and not carelessly.

This study will measure the quality of the Corona.jakarta.go.id website from the perception of website users by using four instruments from the Webqual 4.0 method. Webqual is a method used to measure the quality of a website based on the perception of the end user of the website. In measuring website quality, three dimensions of website quality use the Webqual 4.0 method, namely Usability quality, Information quality and Service Interaction quality. Following is the Webqual 4.0 model shown in Figure 1.
There are 3 hypotheses that being tested by this study. These hypotheses are:

H1: Usability Quality has a significant influence on user satisfaction (User Satisfaction)

H2: Information quality has a significant effect on user satisfaction (User Satisfaction)

H3: Service Interaction Quality has a significant effect on user satisfaction (User Satisfaction).

The use of Webqual 4.0 as a theory to determine community satisfaction is often done, for example on educational sites [4]. However, there are not many users of this theory for evaluating public satisfaction on the web relating to Covid-19 management. So that the contribution of this research is to provide recommendations on indicators of user satisfaction with the Covid-19 website, specifically the Corona.jakarta.go.id website.

The website quality measurement model can be measured by question indicators of each variable, the following are indicators designed on the questionnaire:

| Table 1. Webqual 4.0 Three Main Dimensions[11][12] |
|-----------------------------------------------|
| **Quality** | **Description** |
| **Usability** | |
| 1 | I find the site easy to learn to operate |
| 2 | My interaction with the site is clear and understandable |
| 3 | I find the site easy to navigate |
| 4 | I find the site easy to use |
| 5 | The site has an attractive appearance |
| 6 | The design is appropriate to the type of site |
| 7 | The site conveys a sense of competency |
| 8 | The site creates a positive experience for me |
| **Information Quality** | |
| 9 | Provides accurate information |
| 10 | Provides believable information |
| 11 | Provides timely information |
| 12 | Provides relevant information |
| 13 | Provides easy to understand information |
| 14 | Provides information at the right level of detail |
| 15 | Present the information in an appropriate format |
| **Service Interaction Quality** | |
| 16 | The website has a good reputation |
| 17 | Users feel safe to access the website |
| 18 | Users feel safe about their personal information |
| 19 | The website provides space for personalization |
| 20 | The website provides space for the community (lecturers / students) |
| 21 | The website makes it easy to communicate with organizations (lecturers, staff, students, and other stakeholders) |
| **Overall Quality** | |
| 22 | Consumer satisfaction of overall website quality |
The number of questions is 22 questions where the usefulness variable is 8 questions, the information quality variable is 7 questions, the service interaction quality variable is 6 questions and the overall variable is 1 question. The assessment for each question uses a Likert Scale consisting of 5 answer choices to assess the perception of website quality, as shown in Table 2.

Table 2. Likert Scale

| No. | Perceptions    | Score |
|-----|----------------|-------|
| 1   | Dissatisfied   | 1     |
| 2   | Less Satisfied | 2     |
| 3   | Hesitate       | 3     |
| 4   | Satisfied      | 4     |
| 5   | Very Satisfied | 5     |

3. Result and Analysis

3.1. Respondent Demographics

Table 3. Respondent Demographics

| Characteristics | Total | Percentage (%) |
|----------------|-------|----------------|
| Gender         |       |                |
| Male           | 58    | 58.9           |
| Female         | 44    | 43.1           |
| Age            |       |                |
| <20            | 5     | 4.9            |
| 20-29          | 74    | 72.5           |
| 30-39          | 17    | 16.7           |
| 40-49          | 6     | 5.9            |
| ≥50            | 0     | 0              |

Respondents in this study were 109 community respondents who had experience accessing www.corona.jakarta.go.id. Based on the data in table 3 there are 58 male respondents and 44 female respondents. Most respondents aged less than 20 years amounted to 5 respondents, aged 20 to 29 years totaling 74 respondents, aged 30 to 39 years totaling 17 respondents, aged 40 to 49 years totaling 6 respondents and more than 50 years of age there were no respondents. Www.Corona.jakarta.go.id users are not only in the Jakarta area, but there are also those outside the Jakarta area to the entire world. In this study, we obtained data from distributing questionnaires online using google forms. In this questionnaire there is a question how many times users access the website in one week. This question is used to ensure that the users who fill out the questionnaire are users who have visited the website or frequently visited the website.

4. Testing the Measurement

Model in this study, we will examine the relationship between latent variables and indicators or the outer model explains how each indicator relates to the latent variable. There are several stages in outer model testing, namely Convergent Validity, Discriminant Validity, Composite Reliability, Average Variance Extracted (AVE) and Cronbach Alpha. Convergent validity value is the value of the loading factor stacking on the latent variable with the indicator. Expected loading factor value is > 0.7 but if the outer loading value is 0.5 it can still be tolerated to be included in the model. And the following is a research model after the value of each indicator is entered and processed using the PLS Algorithm in Figure 2.
Figure 2. Path Diagram Construction

Based on the user’s perception of each indicator, it has an external loading value of more than 0.7. This means it has a positive impact on users of the Official Media Website for Infectious Diseases that are Emerging Now (Corona.jakarta.go.id). The construct will be valid and reliable if it has a AVE value above 0.50, a composite reliability above 0.70 and a Cronbach alpha value above 0.70.

Table 4. Value of Construction Validity and Reliability

| Variable                  | Cronbach Alpha | Composite Reliability | AVE  |
|---------------------------|----------------|------------------------|------|
| Usability                 | 0.855          | 0.886                  | 0.495|
| Information Quality       | 0.895          | 0.918                  | 0.617|
| Interaction Quality       | 0.839          | 0.872                  | 0.556|
| User Satisfaction         | 1.000          | 1.000                  | 1.000|

Table 5. T-Statistic Value

| Variable                                    | T-Stat |
|---------------------------------------------|--------|
| Usability -> User Satisfaction              | 2.441  |
| Information Quality -> User Satisfaction    | 2.647  |
| Interaction Quality -> User Satisfaction    | 0.223  |

The coefficient path or inner model values indicate the level of significance in hypothesis testing. The significance of the coefficient path indicated by the t-statistic value must be above 1.66 for the hypothesis at alpha 5 percent. So the variables that have a significant relationship are shown in table 5. Then from the results of this study based on the T-statistic values above, H1,
H2, are accepted because the T-statistic value > 1.66, which means that the variables namely the quality of usefulness and quality of information have positive effect on user satisfaction variables. while H3 is not accepted because < 1.66 which means that the service quality variable does not have a positive influence on the user satisfaction variable.

5. Conclusion
There are positive and negative effects of each variable on Webqual 4.0 on variables to the Covid jakarta website. There are 2 positive exogenous variables. because the two variables have a statistical value > 1.66, namely the quality of usability has a value of 2.097 and the quality of information is 3.236, while I is negative because the variable has a statistical value > 1.66, namely the quality of service has a value of 0.140. And based on the value of R square in this study included into moderate R square. The variable of usability quality, information quality and interaction quality can explain the variable user satisfaction by 0.448 or by 44.8% through linear relationships, while the value of 0.552 or 55.2% for the remainder, is influenced by other variables outside this study. Quality of service interaction (Service Interaction Quality) needs to be a concern for management so that it becomes a top priority to be improved, added, improved as in terms of website security, available channels of communication both personal and community as well as questions, complaints and input from the public to be immediately accepted, processed and informed along with the community’s need for ease and speed of service.

References

[1] C. M. H. Warjiyono, 2018. Pengukuran Kualitas Website Pemerintah Desa Jagalempeni Quality Measurement Of Jagalempeni Village Government Website Using Webqual 4 . 0 Methode. vol. 5, no. 2, pp. 139–146. doi: 10.25126/jttiik.201852666.
[2] R. S. Donie, E. Prihantoro, and F. D. Lestari, 2019. The Effect of Usability , Quality of Information , And Interaction Services Quality on User Satisfaction of Depok City Government Website Services Using Webqual 4 . 0 Method. vol. 8, no. 10, pp. 234–241.
[3] B. S. Santos and M. F. Anwar, 2015. Analisis Kualitas Website Menggunakan Metode Webqual dan Importance-Performance Analysis (IPA) Pada Situs Kaskus. Natl. Conf. Inf. Technol. Tech. Eng., no. September, pp. 1–8.
[4] A. Mustopa, S. Agustiani, and S. K. Wildah, 2020. Analisa Kepuasan Pengguna Website Layanan Akademik Kemahasiswaan. vol. 18, no. 1, pp. 75–81.
[5] P. Rita, T. Oliveira, and A. Farisa, 2019. The impact of e-service quality and customer satisfaction on customer behavior in online shopping. Heliyon, vol. 5, no. 10, p. e02690, doi: 10.1016/j.heliyon.2019.e02690.
[6] S. Monalisa, 2016. Analisis Kualitas Layanan Website Terhadap Kepuasan Mahasiswa dengan Penerapan Metode Webqual ( Studi Kasus : UIN Suska Riau ). J. Sains, Teknol. dan Ind., vol. 13, no. 2, pp. 181–189.
[7] Fatnur Rohman and Didik Kurniawan, 2017. Pengukuran Kualitas Website Badan Nasional penanggulangan Bencana Menggunakan Metode Webqual 4.0. Ilmu Pengetah. dan Teknol. Komput., vol. 3, no. 1, pp. 31–38.
[8] J. F. Hair, M. Sarstedt, L. Hopkins, and V. G. Kuppelwieser, 2014. Partial least squares structural equation modeling (PLS-SEM): An emerging tool in business research. Eur. Bus. Rev., vol. 26, no. 2, pp. 106–121, doi: 10.1108/EBR-10-2013-0128.
[9] A. Y. Rezkiani, Suprapto, and A. Rachmadi, 2018. Pengukuran Kualitas Website Unit Pengembangan Karir dan Kewirausahaan Universitas Brawijaya Menggunakan Metode WebQual 4 . 0. J. Pengemb. Teknol. Inf. dan Ilmu Komput., vol. 2, no. 2, pp. 523–532.
[10] D. O. S. Syaifullah, 2016. Pengukuran Kualitas Website Menggunakan Metode Webqual 4 . 0. vol. 2, no. 1.
[11] M. L. Jundillah, J. E. Suseno, and B. Surarso, 2019. Evaluation of E-learning Websites Using the Webqual Method and Importance Performance Analysis. vol. 01, no. 201 9, pp. 1–5.
[12] B. C. Shia, M. Chen, A. D. Ramdansyah, and S. Wang, 2016. Measuring Customer Satisfaction toward Localization Website by WebQual and Importance Performance Analysis (Case Study on Aliexpress Site in Indonesia). no. February, pp. 117–128.