User satisfaction of covid19 Kota Bogor website using webqual 4.0

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Abstract. Nowadays E-Government has a huge impact on supporting and running governments around the world. And a government site is a tool for interacting between the government and its citizens. Recent studies have shown that the quality of the website becomes something that the government mandatory. This research examines the overall quality of the website Covid19 Bogor City. Using the Webqual methodology to assess the quality of the website and to see how the Bogor city government maintains the expectations of its citizens or users. From a three-dimensional variable that has been given by webqual and from 119 respondents as a sample of this research, the author finds that all three variables have significant results for the satisfied citizens or users with certain aspects of the facilities, contents, and menus of the website. Majority respondents who have accessed and using the website of Bogor City Covid19 satisfied with the facilities.

1. Introduction
Since its inception, the channel or portal COVID19 application in the city of Bogor has been expected as an initiative of e-Government that seeks to facilitate health and information in particular COVID19 pandemic to the citizens of Bogor Indonesia. COVID19 became a global pandemic [1] Despite developing countries such as Indonesia. Bogor is a metropolitan Jakarta satellite city that experiences rapid population growth [2] and the home of many Jakarta workers. COVID19 cases in Bogor have tremendous growth, even the main ones themselves have been reported to be infected by viruses [3]. Information and handling of COVID19 is indispensable for residents of Bogor, for the government’s need to have created a website that can show the map of COVID19 geospatial distribution, including ODP (person in supervision) without symptoms, PDP (patient in supervision) patients in care and positive infected people in Bogor area [4]. This Website also shows government advice, nearby health facilities, an urgent phone number for the COVID19 case [5]. This COVID19 information Website will be updated daily[6].

The application of communication and information technology in the government environment, known as e-Government, will provide extensive benefits and can be utilized for the benefit of many things, especially those relating to COVID19 information in the city of Bogor. The development of communication and information technology in the governance process will increase the efficiency, effectiveness, approval, and accountability of the government.
This study will test the quality of the COVID19 information website in Bogor City. Use the 4.0 webqual methodology to assess the quality of the website and to see how the Bogor city government maintains the expectations of its citizens or users.

Figure 1 shows the main page of the site Covid19 Bogor. Current information and data are updated daily and are instantly displayed on the main page. Link URL can be accessed on the subdomain of Bogor official website or through a direct link [13].

In this study, there were three hypotheses, which relate to intrinsic motivation and correlation. H1 is for quality usability having a positive effect on user satisfaction, H2 for positive information quality effects on user satisfaction, and H3 is for quality interaction Service has a positive response to user satisfaction.

2. Proposed Method
This study uses quantitative descriptive methods and the goal of this study is to make facts, descriptions, images displayed systematically and accurately about the nature, fact, and correlation between the phenomena that have been examined. According to [11], It was stated that the use of statistical data to analyse quantitative data. The statistics used can be either inductive or descriptive inferential statistics. Statistics can be either inferential, non-parametric, and parametric statistics. Statistics can be either inferential, parametric, and non-parametric statistical statistics.

Use a research approach to operating a website, one of the qualities of the website identified in this research is "easy to find". Excellent quality characteristics and relevant to the needs of the user [12]. In Figure 3, the author has a step by step process to do this research.
With the technical approach of Webqual 4.0, what respondents are aware and feel after used the website being recorded. This questionnaire is intended to obtain the required information, in writing, from a questionnaire of citizen respondents in Bogor or outside Bogor as much as 119 people associated with the study. The scoring system uses the Likert 1-4 scale to minimize the uncertainty of respondents input results.

This research will use the Webqual 4.0 technique to examine and analyze the quality of the website and the modified approach of previous research. Research instruments will have 3 dimensions and 21 site attributes of quality service measurements. This attribute can be seen in Table 1.

| Category           | Questions                                                                 |
|--------------------|---------------------------------------------------------------------------|
| Usability          | Using the website is very easy to adapt (U1)                              |
|                    | Site interaction is very clear (U2)                                       |
|                    | Navigation of the site is very easy (U3)                                  |
|                    | The site is easy to use (U4)                                              |
|                    | Site attractiveness (U5)                                                  |
|                    | Nice appearance (U6)                                                     |
|                    | Delivering a competency (U7)                                              |
|                    | Nice user experience (U8)                                                 |
|                    | Show accurate and update information (U9)                                 |
| Information Quality| Show trusted information (I0)                                             |
|                    | Show real time information (I11)                                          |
|                    | Show relevant and actual information (I12)                                |
|                    | Information is very easy to understand (I13)                             |
|                    | Detail of Information is accurate (I14)                                   |
|                    | Format of information is nicely done (I15)                                |
| Service Interaction| Nice reputation (S16)                                                     |
|                    | Secure to do the transactions (S17)                                       |
|                    | Information is safe (S18)                                                 |
|                    | Can be personalization (S19)                                              |
|                    | Provide a community way (S20)                                             |
|                    | Organization can be access with a communication (S21)                    |

Next step is to do a validity and reliability test to know how much the correctness of the data collection process has taken from the filling of the questionnaire by the respondent if it does not meet the lawful reliability standards and otherwise, the data collection stage will always be repeated until the process is reliable and fully tested and qualified criteria.

After receiving 119 respondents for data analysis, the cluster sampling method used for sample selection step in this study and using a "survey form" from Google online because of the analysis of data from respondents in populations that had different sampling characteristics or categories such as residents of Bogor or outside the city of Bogor.

The hypothesis tested, such as the H1 expectation against variable dimensions, is ideal respondents of the quality of usability on the website of service quality COVID19 in the city of Bogor is significant and there is a striking difference between actual perception. H2 has a significant difference relationship between actual perception and expectation of ideal dimensions of respondents quality information about the quality of the COVID19 service website in Bogor.
The latter is the H3 where there is a significant difference between the actual perception and the ideal dimensional perception of respondents of the interactive service on the quality of the Service site COVID19 Bogor.

### Table 2: Respondent Demographic

| Category | Variable | Percentage |
|----------|----------|------------|
| Gender   | Male     | 52%        |
|          | Female   | 48%        |
| Age      | <20 years| 7.2%       |
|          | 20-40 years| 88.8%   |
|          | >40 years| 4%         |
| City     | Bogor    | 22.8%      |
|          | Other    | 77.2%      |

From Table 2, there are respondents in this study, they are Indonesian citizens who have accessed at least once from the COVID19 application of the Bogor city website. Judging from the age side of the respondent, 52% of male sex and the remaining 48% of the female gender. Most respondents were between 20 and 40 years old. This study is not only for local Bogor townsfolk but also for residents who live outside the city of Bogor.

### 3. Result and Analysis

#### 3.1. Validity

A result of the diagram path in Figure 3 was built after adopting the conceptual model and executing the algorithm PLS, this diagram has four latent constructions as variables describing the hypothesis of this study. All variable constructions are evaluated and inspected by conducting multiple tests such as structural evaluation model measurements, evaluation models, and evaluation of hypotheses as required by the analysis method PLS-SEM in SmartPLS 3.0 application.

First of all, the data that we have received from the results of the survey conducted logical screening such as the deletion of minors false like responded with underage or does not have an ID card from the government. The most important step in the process that must be passed in this study is to test and analyze all data validation so that the data to be known whether it has been obtained and that can describe the real fact with the fact that occurs so that the data is valuable for further investigation and can be used to measure all objects. In the research on the website of Covid-19 Bogor city, authors spread measuring instruments in the form of a questionnaire.

Before stepping into the next step, the important process that needs to be done is to know the validity of the collected data itself. Testing the validity by calculating the comparison between R counting and R table where the value of the R table is collected with the product table from R with significance rate 0.05 (5%) with n = 119, which can be seen in table 3. The value of the R table for df = 119 (df = n-2) is 0.1801. If R calculates the > R table, then the questionnaire item question is valid. On the other hand, if R counts the < R table then the question item from the questionnaire is invalid. Therefore, any questionable items from the service attribute must have a value above 0.1801 to be forwarded or valid.
3.2. Reliability

The Reliability test in Table 4 of this study uses the Cronbach Alpha coefficient. Reliability refers to data indicating the stability and consistency of each attribute in this study. A reliable data test known as data collection that’s free from random error variances. Based on the value
gained from each attribute value at the actual level and the expectation level, where each item has an Alpha value of Cronbach above 0.5, then every item of a distributed question is said to be reliable for the author to proceed to the next research step.

3.3. Hypothesis
To get the hypothesis test and the path value coefficient then it was tested with the bootstrapping function on SmartPLS. Table 5 is the result of T-stats. The value of the coefficient path or inner model indicates significance levels in the hypothesis testing. The significance of the path of the coefficient indicated by the T statistical value should be above 1.97 for the hypothesis in Alpha 5%. So that variables that have significant relationships are indicated in the table.

Therefore, the results of this research are based on the T-statistic value above then $H_1$, $H_2$, $H_3$ received due to the T-statistic value > 1.97, which means that three usability variables, quality information, and quality service interactions have a positive influence on user satisfaction variables.

### Table 4: Variable Reliability

| Variable                  | Cronbach’s Alpha | AVE     | Result   |
|---------------------------|------------------|---------|----------|
| Information Quality       | 0.955            | 0.847   | Reliable |
| Service Interaction Quality | 0.949         | 0.907   | Reliable |
| Usability                 | 0.974            | 0.811   | Reliable |
| User Satisfaction         | 0.984            | 0.786   | Reliable |

### Table 5: Hypothesis Result

| Path                               | T Statistics | P Values | Result   |
|------------------------------------|--------------|----------|----------|
| Information Quality $\rightarrow$ User Satisfaction | 44.009       | 0.000    | Accepted |
| Service Interaction Quality $\rightarrow$ User Satisfaction | 27.657       | 0.000    | Accepted |
| Usability $\rightarrow$ User Satisfaction       | 57.960       | 0.000    | Accepted |

4. Conclusion and Future Research
Site Analysis Web19 Bogor City uses Webqual 4.0 that focuses on the quality of information, services, and usability interactions. The research instrument is valid. These results were demonstrated by the validity test of the study that was declared valid on 18 questions. Reliability in stability and consistency of each attribute has shown a reliable result. Test 3 hypotheses have provided acceptable value based on the T-Statistic value. The results showed that the majority of respondents received or satisfied with the content, facilities, and menus contained in the website.

The results of this research are expected to be made recommendations for relevant agencies to be able to improve the quality of the website application service COVID19 Kota Bogor based on the indicator from webqual 4.0. Further research can be done by increasing the number of samples and expanding the reach area of the respondent to achieve better results.
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