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## Optimizing Depok City Government Website in Realizing an Electronic-Based Government System

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### Abstract

The Electronic Based Government System (SPBE) is implemented in accordance with Presidential Regulation Number 95 of 2018 concerning SPBE. Ministry. Institutions and agencies must create clean, effective, transparent and accountable governance. One of the studies in SPBE is transparency of information through the City Government website. City Government is serious about building city government web to provide complete information needed by all people. Web optimization is needed to support the performance and achievements of the City Government in general. This study aims to determine how much influence the variables of usability, information quality, quality of service interactions have on user satisfaction of city government websites partially and simultaneously. The subjects in this study were 100 people who were the visitors of the website [depok.go.id](http://depok.go.id). In this study, the quality of the [depok.go.id](http://depok.go.id) website was measured using the WebQual 4.0 method. The sampling technique was using purposive sampling technique. The data analysis used in this research is multiple analysis. The results showed that the variables of use and quality of information were partially influential with the effect of 67.5% and 37.5%, while the quality of service interactions had no effect. Simultaneously, the three variables have an effect on website user satisfaction with a large effect of 70.35. This means that the website of the City Government of Depok has gained the public's trust as a source of quality and satisfying information for the Depok community, including those related to SPBE.

**Keywords:** Optimization; Website; City Government; Creating.

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## **1. Introduction**

The rapid development of information technology has an impact on changes in organizational or company services. Currently, services to users can also be done online, for example companies that sell their goods / services through their company websites. Meanwhile, non-profit government agencies can provide services such as information to the public and online licensing arrangements.

The application of communication and information technology in government, which is known as e-government, is believed to provide broad benefits, not only for the state and its administrators, but also for the public who receive services. The use of communication and information technology in government processes will increase efficiency, effectiveness, transparency and accountability in government administration, Indonesia has realized. The government, in this case the Ministry of Communication and Information Technology, has established a National Policy and Strategy on e-government development [4].

Local government websites can be used as a means of conveying accountability for budget execution and local government to the public. Research in several countries shows that one form of transparency and accountability of local governments is carried out by publishing financial reports on the internet [5]. Almost all LGs in Indonesia have a website, with website quality and different roles. Some only provide general information about the area, but others have used it for community service activities, socialization of regulations and means of communicating interactively with residents.

Depok City Government is one of the government agencies that has an active official news portal which not only provides general information about Depok City, but also this website is used for community service activities and a means of interaction with the community. Not only daily news about Depok City, but the official Depok City Government website also provides a menu of Citizen Interaction options with telephone communication options and several official social media accounts of the Depok City Government. The official website of the Depok City Government also provides a Licensing Service menu, which contains information on what permits can be done and filling out licensing forms online.

The official website of the Depok City Government which is managed by the Depok Communication and Information Agency provides quite complete news information, starting from general news about activities and events that occur in Depok City, news on OPD (Regional Apparatus Organizations), press releases, and Warta Depok which release one. once a month. With this City Government website, it is very easy for Depok residents to get information about Depok City, what are the activities and events that occur every day in Depok City.

Several regulations in Indonesia have mentioned implicitly regarding the use of electronic media to disclose information to the public. These regulations include PP. 6 of 2008, PP. 3 of 2007, and Permendagri No. 7A of 2007. Electronic media in the three regulations referred to can refer to local government-owned websites that can be used by local governments to disclose information to the public. The information that should be disclosed by local governments through electronic media is: information on reports on regional government administration PP No. 3 of 2007 and Permendagri No. 7A of 2007 and results of evaluation of local government administration

PP No. 6 of 2008. Referring to the three regulations, disclosure of information other than information on reports on regional government administration and results of evaluation of local government administration can be classified as voluntary disclosure.

To see the optimization of the use and benefits of the Depok City Government website, it can be seen from the webqual. The Webqual method is a method to determine the quality of a website based on public or user perceptions [2]. The Webqual 4.0 method used in this study consists of three categories, namely usability, quality of information, and quality of service interactions. Usability is the quality associated with site design; quality of information is the quality of the content contained on the site; and the quality of service interactions is the quality of service interactions experienced by users when users investigate the site more deeply. The three categories are used as a reference in making a questionnaire to analyze the quality of the Depok City Government website <http://depok.go.id>. The results of the analysis are expected to be a recommendation for a government agency in developing a quality website so that the development of the official website of the Depok City Government can increase towards maturation, stabilization, and ultimately reaching the level of utilization.

## **2. Literature Review**

E-Government development based on Presidential Instruction No. 3 of 2003 is an attempt to develop (using) electronic based governance in order to improve the quality of public services effectively and efficiently [4]. To develop a management system and take advantage of advances in information technology, the government must immediately carry out the E-Government transformation process. Through the development of E-Government, management systems and work processes in the government are structured by:

- Optimizing the use of advances in information technology to eliminate organizational and bureaucratic barriers,
- Establish a network of management systems and work processes that allow government agencies to work in an integrated manner, to simplify access to all information on public services that must be provided by the government.

Public services are all forms of services, both in the form of public goods and public services, which in principle are the responsibility of and are carried out by government agencies at the Central, regional and within the State or Regional Owned Enterprises environment, in the framework of implementing the provisions of regulations legislation. Public service activities are organized by government agencies. Government agencies are a collective designation covering work units or individual units of ministries, departments, institutions, non-departmental government, secretariat of the highest and highest state institutions, and other government agencies, both central and regional including Regional-Owned Enterprises. As recipients of public services are people, communities, government agencies and legal entities.

WebQual has been developed since 1998 and has undergone several iterations in arranging dimensions and question points. WebQual 4.0 is a development of its predecessor versions, namely WebQual 1.0, WebQual 2.0, WebQual 3.0 and the incorporation and customization of Servqual. This study uses the WebQual 4.0 method to

analyze the quality of the official website of the Depok City Government through the concept of usability, information quality, and service interaction quality. Usability is a quality related to site design. The quality of information is the quality of the content contained on the site. The quality of service interactions is the quality of service interactions experienced by users when users investigate the site more deeply. Table 2.1 shows the categories and statements on WebQual 4.0 that will be used in the questionnaire.

**Table 1:** WebQual 4.0 method

Category	WebQual 4.0 Questionnaire
Uses	<ol style="list-style-type: none"> <li>1. Having no difficulty in using this website</li> <li>2. How to interact with this website is easy to understand</li> <li>3. Navigation / directions on this website are clear</li> <li>4. This website is easy to operate</li> <li>5. Design this website according to the wishes of the user</li> <li>6. The response time on this website is in accordance with the wishes of the user</li> </ol>
Quality of Information	<ol style="list-style-type: none"> <li>1. The website provides accurate information</li> <li>2. The website provides up to date information</li> <li>3. The website provides relevant information</li> <li>4. The website provides information that is easy to understand</li> <li>5. The website provides detailed information</li> <li>6. The website presents information in a format that suits your needs</li> </ol>
Quality of Service Interaction	<ol style="list-style-type: none"> <li>1. The website has a good reputation</li> <li>2. The website gives a personal impression</li> <li>3. The website gives a pleasant impression</li> <li>4. The website provides a positive experience</li> </ol>

### 3. Methods

This study uses a quantitative approach because the analysis in this study focuses more on numerical data (numbers) which are processed using statistical methods. In addition, the WebQual method and the sub-category analysis of questions were used as a quantitative approach.

The population in this study were users of the Depok City Government website <http://depok.go.id>. The sample design used was purposive sampling, in which the selected sample had the specified criteria. The sample in this study amounted to 100 respondents.

The data analysis technique used in this research is statistical analysis technique. Where researchers will use SPSS 20.0 for Windows software in calculating data. Some of the tests performed were validity and reliability tests, simple and multiple linear regression tests.

### 4. Results and Discussion

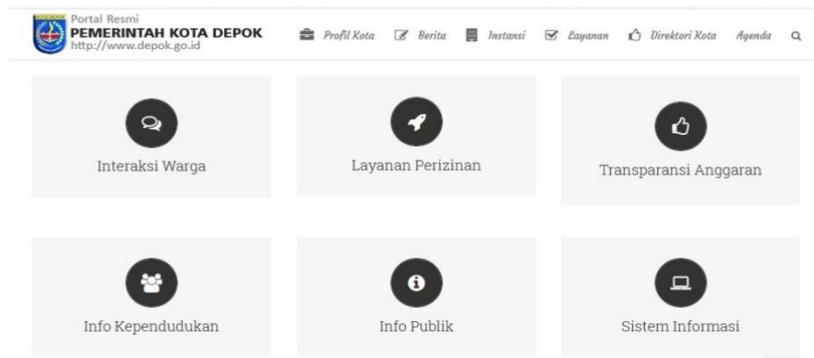
The implementation of regional autonomy aims to create information and technology-based services. Depok City as one of the Regional Governments in Indonesia which also takes part in fulfilling the obligation to implement Presidential Instruction No. 3 of 2003 [4], namely through the Depok City website:

www.depok.go.id provides access to information, services, and others -other. At this stage the local government website can display information about local government, especially at the emergence stage by introducing various information related to local government. The official website / portal of Depok City via www.depok.go.id displays information, including:



**Figure 1:** Main Page of the Depok City Government Official News Portal

The features or further information that can be accessed by the public on the City government website include:



**Figure 2:** Community Needs Selection Menu Presented on the Website

The data that the researchers obtained from the official portal admin of the Depok City Government, there were quite a lot of visitors to this website, around 552,510 visitors in 2017 starting from January 1 to December 31, 2017, with an average monthly visitor touching approximately 40,000 people.

Local government websites can display information about local governments, especially at the emergence stage by introducing various information related to local government. The official website / portal of Depok City, via www.depok.go.id, displays information, including city profiles, news, agencies, services, city directorates, and agendas. The features or further information that can be accessed by the public on the City government website include citizen interaction, licensing services, budget transparency, population information, public information, and information systems. The data that the researchers obtained from the official admin portal of the Depok City Government, there were quite a lot of visitors to this website, around 552,510 visitors in 2017 from January 1 to December 31, 2017, with an average monthly visitor touching approximately 40,000.



**Figure 3:** depok.go.id website visitor data report in 2017

The questionnaires distributed from 29 March - 20 April 2018 were filled in by 100 respondents. The respondents of this study were dominated by 67 women and 33 men as in Table 2 below:

**Table 2:** Gender of Respondents

Gender	Amount	Percentage (%)
Man	33	33
Women	67	67
Total	100	100

This multiple regression test is conducted to see how much influence the three independent variables together have on user satisfaction. Descriptive analysis is used to see data characteristics, such as the average (mean) of a group of data. To perform descriptive analysis, the researcher used the IBM SPSS 20 Statistic application.

Usability variable consists of 6 indicators, including easy to use, easy to intimate, clear navigation, easy to operate, attractive design, appropriate response time. The utility variable has an average rating of 2.78, which means that the majority of respondents are quite neutral with the statements / items in the utility variable. A recapitulation of the respondent's answer and the mean value of each item in the utility variable can be seen in Table 3 below:

**Tabel 3:** Variable Usability Description

Item	Skala					Mean
	1	2	3	4	5	
Website easy to use	10	23	45	13	4	2,88
Interaction with the website is easy	6	12	36	32	14	2,36
Navigation on the website is clear	9	21	43	23	4	2,92
Easy website operation	15	21	41	19	4	2,76
Website design as you wish	18	20	36	19	7	2,77
Website response time is appropriate	9	19	44	20	8	2,99

The Information Quality variable consists of 6 indicators, namely accurate information, up to date information, relevant information, easy to understand information, detailed information, and accurate information format. The information quality variable has an average rating of 3.29, which means that the respondent is very neutral towards agreeing with each statement of the information quality variable. Recapitulation of respondents answers and the mean value of each item in the information quality variable can be seen in Table 4 below:

**Table 4:** Description of Information Quality Variables

Item	Skala					Mean
	1	2	3	4	5	
Website information is accurate	7	17	43	25	8	3,10
Up to date website information	7	22	37	25	9	3,07
Relevant website information	3	15	30	25	27	3,58
Website information is easy to understand	14	27	39	10	10	2,75
Detailed website information	1	6	27	41	25	3,83
Website information format is appropriate	3	9	47	26	15	3,41

The Interaction Service Quality variable consists of 7 indicators, namely good reputation, personal impression, pleasant impression, positive experience, easy communication with admin, required information, and the last is communicative impression. The interaction service quality variable has an average rating of 3.90, which means that the respondent quite agrees with each statement / item in the interaction service quality variable. A recapitulation of the respondent's answer and the mean value of each item in the interaction service quality variable can be seen in Table 5. The following:

**Table 5:** Descriptions of Interaction Service Quality Variables

Item	Skala					Mean
	1	2	3	4	5	
Good website reputation	3	9	46	27	15	3,42
Personal impression on the website	2	1	35	43	19	3,76
Nice impression on the website	3	3	20	35	39	4,04
Positive experience on the website	2	1	14	41	42	4,20
Easy to communicate with admin	2	0	23	42	33	4,04
Information required	11	0	41	31	17	3,54
Communicative impression on the website	2	0	9	32	57	4,42

The User Satisfaction Variable consists of 3 indicators, namely the website is good, the user is satisfied, the user will visit again. The user satisfaction variable has an average rating of 3.06, which means that the respondent is neutral with every statement / item in the user satisfaction variable. Recapitulation of the respondent's answer and the mean value of each item in the user satisfaction variable can be seen in Table 6 below:

**Table 6:** Description of User Satisfaction Variables

Item	Skala					Mean
	1	2	3	4	5	
<b>Good website quality</b>	7	10	42	30	11	3,28
<b>Website users are satisfied</b>	8	20	39	23	10	3,07
<b>Users will visit again</b>	13	13	48	16	6	2,85

The validity test is carried out to measure the validity of items or statements in the questionnaire that has been compiled. The validity test in this study was carried out by correlational analysis. The validity test in this study was carried out on all variables, namely, Usability, Quality of Information, Quality of Service Interactions, and User Satisfaction. An item or statement is said to be valid if the coefficient value can be seen in the Corrected Item-Total Correlation column  $\geq 0.300$ .

Reliability test is used to determine the consistency of measuring instruments using a scale. The reliability test is used to determine whether the measuring instrument will get consistent measurement results if the measurement is repeated. The level of reliability is empirically indicated by a number called the reliability coefficient value. The reliability of this study Cronbach's Alpha value  $\geq 0.700$  as in table 7 below:

**Table 7:** Reliability Test of all variables

Reliability Test of Variable Measurement Tools	Cronbach's Alpha	N of Items
<b>Usability</b>	<b>0,846</b>	<b>6</b>
<b>Quality Of Information</b>	<b>0,778</b>	<b>6</b>
<b>Quality Of Service Interactions</b>	<b>0,854</b>	<b>7</b>
<b>User Satisfaction</b>	<b>0,744</b>	<b>3</b>

In this study, two regression analyzes were carried out, namely simple linear regression analysis and multiple linear regression analysis. Simple linear regression analysis was carried out to see how much the influence of the Usefulness variable on User Satisfaction, how much the influence of the Information Quality variable on User Satisfaction, and how much the influence of the Interaction Service Quality variable on User Satisfaction was contributed. Meanwhile, multiple regression analysis was carried out to see how much the contribution of the influence of all independent variables to the dependent variable.

The results of the regression analysis of the Usefulness variable on User Satisfaction can be seen in table 7 where the R Square value is 0.675, which means that the utility variable contributes to the effect of 67.5% on user satisfaction.

**Table 8:** Simple Linear Regression Test Usefulness on Satisfaction User

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,821	,675	,671	1,46409

The results of the regression analysis of the Information Quality variable on User Satisfaction can be seen in table 8 where the R Square value is 0.373, which means that the information quality variable contributes 37.3% to user satisfaction.

**Table 9:** Simple Linear Regression Test on Information Quality User Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,611	,373	,367	2,03312

The results of the regression analysis of the Interaction Service Quality variable on User Satisfaction can be seen in Table 9 where the R Square value is 0.001, which means that the interaction service quality variable contributes 0.01% to user satisfaction.

**Table 10:** Simple Linear Regression Test Service Quality Interaction on User Satisfaction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,028	,001	-,009	2,56645

This multiple regression test is conducted to see how much influence the three independent variables together have on user satisfaction.

**Tabel 11:** Output Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,838	,703	,694	1,41404

In table 11, it can be seen that the R Square value is 0.703, which means that the three independent variables, namely usability, information quality, and user service quality together contribute 70.3% to user satisfaction. While the remaining 29.7% is the influence of other factors which were not examined in this study.

**Table 12:** ANOVA Regression Output

Model		Sum of squares	df	Mean Squares	F	Sig.
1	Regression	454,047	3	151,349	75,693	,000
	Residual	192,953	96	2,000		
	Total	646,000	99			

ANOVA test results using the F test shows the calculated F value of 75.693, with a significance of 0.00. If the significance is less than 0.05, then there is a significant effect simultaneously between all independent variables on the dependent variable.

**Table 13:** Output Regression Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	1,575	1,039		1,517	,133
X1	,378	,037	,707	10,107	,000
X2	,117	,042	,195	2,767	,007
X3	-,050	,031	-,089	-1,577	,118

Table 13 describes the t test, namely the partial test, while significance measures the level of significance of the t test, if the significance is less than 0.05, there is a partial effect between the independent variables on the dependent variable. It can be seen in the table above that the usability variable (X1) and the information quality variable (X2) are statistically significant. Meanwhile, the variable information service quality (X3) is not statistically significant because the significance value is 0.118 which means it is greater than 0.05.

In this study, it can be seen from all valid items of each variable to measure the quality of the website. Several tests have been carried out using SPSS, some of which are the most important test process is a simple linear regression test to see the effect of each variable partially on user satisfaction. user satisfaction) Depok City Government website <http://depok.go.id> and the influence of usability, information quality, and service interaction quality simultaneously or together on user satisfaction. satisfaction) Depok City Government website <http://depok.go.id>.

From the results of the simple linear regression test, it is obtained two variables, namely the use and quality of information that contributes to the Depok City Government website <http://depok.go.id> and one variable, namely the quality of service does not affect the Depok City Government website [.go.id](http://depok.go.id) in this study. The usability variable contributed 67.5% to the influence and the information quality contributed 37.5%.

From the results of the multiple linear regression test in which this test is carried out to see the effect of the three independent variables simultaneously on the dependent variable, namely user satisfaction, the results are obtained if the three independent variables, namely usability, information quality, and service contribute a considerable 70.3% influence on dependent variable user satisfaction website Depok City Government <http://depok.go.id>.

The use of the Depok City Government website <http://depok.go.id> has a fairly good quality and the quality of the information provided needs to be improved again, and the most focused is the interaction service from this website needs to be improved again, so that communication between Depok people who use the website this to the government can be continued through the services available on the website.

The results of the research using the WebQual 4.0 method mean that the higher the service quality of a website, the higher the satisfaction and intensity of users reusing the website. Meanwhile, the greater the level of someone's satisfaction in using the website, the higher the desire to use it again. Things that can be done to maintain and increase the satisfaction of users of the official website of the Depok City Government by also increasing the usability, quality of information, and quality of website service interactions.

The Depok City Government always evaluates and improves the Depok City Government website to achieve excellent service according to the indicators of the Electronic Based Government System (SPBE) launched by the government. The Depok City Government also prioritizes excellent service to the community, so that people can benefit from the Depok City website.

## **5. Conclusion**

Research on optimization of the website of the Depok City Government in realizing SPBE and services for the Depok community has succeeded in mapping that usability, information quality, and service interaction quality have a positive and significant effect on user satisfaction with the effect of amounted to 70.3%, the remaining 29.7% is influenced by other variables not studied.

The results of the study show that the higher the quality of a website's service, the more user satisfaction and intensity of reusing the website will increase. Meanwhile, the greater the level of someone's satisfaction in using the website, the higher the desire to use it again. Things that can be done to maintain and increase the satisfaction of users of the official website of the Depok City Government are also to increase the usability, quality of information, and quality of website service interactions.

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