An Analysis &Measurement ofWebsite Quality Using The WebQual 4.0 And Importance Performance Analysis (IPA) Method (A Case Study Of Jagalempenivillage Brebes)

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Abstract: Based on the Law of the Republic of Indonesia number 6/2016 on villages that are obliged to develop village information systems in running e-government towards good governance. In Indonesia, e-government continues to increase, but not accompanied by quality, including the website of Jagalempeni Village. This study measures the quality of Jagalempeni Village website using Webqual 4.0 method and Importance Performance Analysis (IPA) with 4 (four) instruments, namely Quality Utility, Information Quality, Service Interaction Quality and Visual Quality. This research is descriptive with quantitative approach. The data of 122 questionnaires and processed with SPSS software. The result of measurement and measurement shows that the website of Jagalempeni Village website is 96.63%, and the average negative gap is -0.12, which means that the performance level of Jagalempeni Village website is still not satisfactory and user expectation on Service Quality Interaction. The main priorities that need to be fixed immediately and improved are the attributes of websites that have a good and precise reputation, input and expression for promptly promised delivery. The results of this study using the website of Jagalempeni Village to make improvements and development in order to become a quality for good governance.

Keywords: Website Quality, Usability Quality, Information Quality, Service Interaction Quality Visual Quality, Webqual 4.0, Importance Performance Analysis (IPA).

1. Introduction

Since the reform era of Indonesia in 1998, a new paradigm was born in the Indonesian government system that is an improvement of better service and public participation in the progress of the nation. The paradigm in Indonesia is called good governance. Villages have the rights to access information through the village information system. The local government is obliged to develop a village information system. Governments, in particular the local government should be able to utilize the advances in information and communication technology to process, distribute information and public services(Laws of the Republic Indonesia 6/2016 about the village).In realizing good governance in terms of accountability and public transparency, it is necessary policy measures directed towards changes in the system(Sari and Winarno, 2012)

The Jagalempeni Village website was built to convey important information from villages, provinces and countries to the community. In addition, as a media to promote the

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potential of the region, providing an easy interaction and administrative services between local governments and the community. Many residents of Jagalempeni Village besides farmers also become overseas workers in Jakarta and abroad. With this website it is hoped that people who are outside the city and abroad can monitor the development of the village from the information and the agenda of the village event. Moreover, they can also interact with the village through online chat and also easily get other public services. The website of Jagalempeni Village which is www.jagalempeni.desa.id has been formally launchedon February 22, 2017 and since then there has been no assessment and improvement.

Implementation of e-government has a positive influence on good governance and is significantly influenced by e-service(Alaaraj, & Ibrahim, 2014).E-government initiatives have a direct impact on citizens. Transformation from traditional government to governance leads to good governance(Kalsi, Kiran and Vaidya, 2009).It can be concluded that service factor has an enormous influence on the success of an e-Government. The development of e-government in Indonesia in quantity began to increase but not evenly distributed, but in quality still many that do not meet the good standard(Sari, & Winarno, 2012). The challenge of the formation of E-Government is that local governments are able to provide quality public services. The quality of E-Government services should be analyzed and elaborated on what strategies are capable of improving the services provided to improve beneficiary satisfaction(Sá, Rocha and Cota, 2016). The ultimate goal of e-government implementation is good governance that the government must be able to provide and deliver public services to the community efficiently and effectively(Madzova, Sajnoski, & Davcev, 2013), while the other opinion that the ultimate goal of e-government implementation is the government needs to achieve good governance while the success of egovernment requires good governance practices (Suhardi, Sofia and Andriyanto, 2015). The role of government towards e-government is as a manager, regulator, controller and supervisor who delivers the latest news, whether it is general information or information about the government, for example information on programs, ongoing and upcoming events, so that people can get information anywhere, anytime (Mulyawaty, 2016).

Previous research related to quality measurement website using method of Webqual 4.0 and Importance Performance Analysis (IPA) showed that one part of the academic information system needs to be improved in order to get the trust and satisfactionof the students (Gata and Gilang, 2017). Subsequent research discusses the website PDAM Surya Sembada Surabaya has never been evaluated so it is not known whether the website has met the expectations of users or not, the results of his research showed that the website needs improvement(Haikal, Herlambang and Wardani, 2018). Based on the research that usability factor has a cognitive effect on website quality. The results of his research recommend to change the look of the website to be more attractive, accurate and up to date information so that people, business and government quickly get information(Irawan, 2012). To measure the quality of the website of Jagalempeni Village using Webqual 4.0 method there are 4 (four) instruments namely Usability Quality, Information Quality, service interaction Quality and Visual Quality, the result is that in terms of Service Interaction Quality there needs to be an immediate improvement in order to become a quality website(Warjiyono and Hellyana, 2018).

The service factor has an enormous influence on the success of an e-Government. The development of e-government in Indonesia began to increase in quantity although it is not evenly distributed, however in quality it still has many that do not meet the good standard(Sari and Winarno, 2012). A quality measurement website using Webqual 4.0 can help website managers adjust the quality of the website according to the user's perception of the website(Hapsari, & Priyadi, 2017).Analysis by combining several evaluation and impact

evaluation factors will help decision makers rather than using one approach(Sivarajah, Irani and Weerakkody, 2015).

This advanced research will add one more method that is Importance Performance Analysis (IPA) method with measurement based on performance level and importance level of user perception. The author wants to know the results of the analysis of each method. The results of analysis and measurement from Webqual 4.0 and IPA can be used as a recommendation for the improvement of Jagalempeni Village website to have good quality in terms of usability, information, service and visual to user satisfaction. The results of this study will contribute to improve the quality of Jagalempeni Village website.

2. Methodology

This research belongs to Deskriptif with quantitative approach. Quantitative methods are methods that can be used for surveys to obtain data that have occurred in the past or present about opinions, behaviors, beliefs to test some hypotheses(Sugiyono, 2014). This research uses survey technique to get primary data that is by spreading the questionnaire. Determination of sample or respondent using random sampling technique.

This study uses questionnaire as the instruments that are made by using closed questions. Determination of sample or respondent technique is random sampling. Questions in the performance level questionnaire and importance level are made using the 5-point Likert scale, which is scale 1 (strongly disagree / important), 2 (disagree / important), 3 (undecided), 4 (agree / important), and 5 (strongly agree / important).

Webqual is a method used to measure the quality of a website based on the perception of the end user website(Barnes, & Vidgen, 2000). IPA is used to compare consumer ratings of the importance of service quality (importance) with the level of service quality performance (performance) is described into the Cartesian diagram(Tileng, Utomo and Latuperissa, 2013). Importance Performance Analysis (IPA) is a method to analyze and compare the level of performance or service to the level of satisfaction(Yola and Budianto, 2013). Importance Performance Analysis (IPA) will identify the important factors of performance and produce the priority scale that will be used by the organization in an effort to meet customer satisfaction.

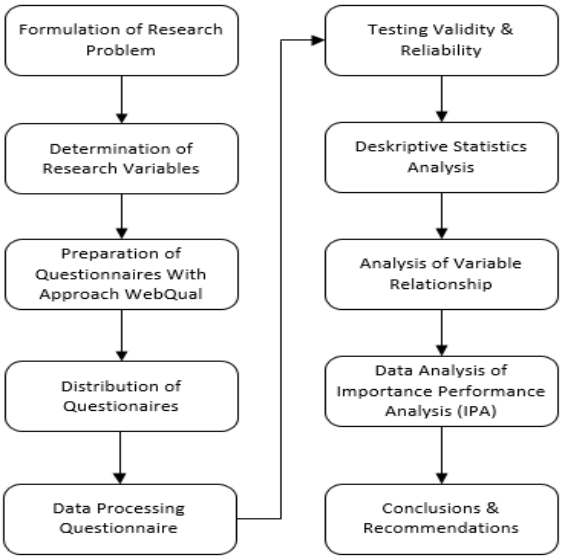
This research will examine the quality of the website of Jagalempeni Village from the user's perception of the website by using Webqual 4.0 method and Importance Performance Analysis (IPA) method.

Table 1. Research Instrument

Indicator	Description
Usability Quality	1. Users find it easy to learn to operate 2. User interaction with the website is clear and understandable 3. Users find it easy to navigate 4. Users feel the website easy to use 5. Website has an interesting appearance 6. Design according to the type of website 7. Website conveys competence 8. Website creates a positive experience for users
	9. Provide accurate information

Indicator	Description
Information Quality	10. Provide reliable information 11. Provide timely information 12. Provide relevant information 13. Giving easy to understand information 14. Provide information at the appropriate level of detail 15. Present the information in the proper format
Service Interaction Quality	16. Website has a good reputation 17. Users feel secure to complete the transaction 18. Users feel secure regarding his personal information 19. Website creates space for personalization 20. Website gives space for the community 21. Website make it easy to communicate with organizations 22. I feel confident that the goods/services will be delivered as promised
Visual Quality	23. Website using appropriate fonts/letters 24. Website use attractive color and styles

Based on table 1, a research instrument for measuring website quality. There are 4 (four) instruments namely Usability Quality, Information Quality, Service Interaction Quality (Barnes and Vidgen, 2002)and additional Visual Quality instruments taken from the Design category(Hasan, 2014). Thus, there are 4 (four) instruments to be tested on User Satisfaction. The results of this study will contribute to improve the quality of Jagalempeni Village website.



Source: Research Result (Warjiyono and Hellyana, 2018)

Fig. 1 Research Framework

3. Results And Discussion

The population of this study is 130 respondents who selected special Jagalempeni Village community who have had experience accessingwww.jagalempeni.desa.id.After the 130 questionnaires has been received and the data have been recorded then the next sample of data is done by clearing to retrieve the data questionnaires are filled completely, in the process of clearing it has been obtained 122 data ready to be processed.

3.1 Validation Test

Validation test is done by correlation technique, that is see the correlation value of r-count, this correlation value is compared with r-table value (table of relationship coefficient "r" moment of product), where a measuring instrument is valid if correlation r-count> r-tabel(Rohman and Kurniawan, 2017). In this study used 5% significance test and 130 samples (N = 130) obtained r-table value is 0.178.

The following is the correlation table and the result of the measurement tool validity analysis of each variable:

Table 2. Validation Test

No	Indicator	Pearson Correlation	ValueTabel-r	Inf
1	q1	0,451	0,178	Valid
2	q2	0,628	0,178	Valid
3	q3	0,504	0,178	Valid
4	q4	0,202	0,178	Valid
5	q5	0,418	0,178	Valid
6	q6	0,232	0,178	Valid

7	q7	0,555	0,178	Valid
8	q8	0,303	0,178	Valid
9	q9	0,613	0,178	Valid
10	q10	0,478	0,178	Valid
11	q11	0,406	0,178	Valid
12	q12	0,450	0,178	Valid
13	q13	0,265	0,178	Valid
14	q14	0,535	0,178	Valid
15	q15	0,644	0,178	Valid
16	q16	0,605	0,178	Valid
17	q17	0,566	0,178	Valid
18	q18	0,414	0,178	Valid
19	q19	0,537	0,178	Valid
20	q20	0,524	0,178	Valid
21	q21	0,520	0,178	Valid
22	q22	0,530	0,178	Valid
23	q23	0,386	0,178	Valid
24	q24	0,385	0,178	Valid
25	q25	1	0,178	Valid

Source : Result Primary Data Processing (Warjiyono and Hellyana, 2018)

3.2 Reliability Test

Test reliability is done by checking the value of Cronbach's Alpha. The alpha coefficient (α) will be used as a measure of internal consistency. The more the value approaches 1, the greater the internal consistency of the items in the questionnaire(Rohman and Kurniawan, 2017). As a rule of thumb, Cronbach's Alpha value above 0.7 ($\alpha \geq 0.7$) is adequate for social science research(Elangovan, 2013).

Table 3. Reliability Test

Variabel	Cronbach's Alpha	ValueTabel-r	Info
UQ	0,303	0,178	Reliable
IQ	0,692	0,178	Reliable
SIQ	0,762	0,178	Reliable
VQ	0,422	0,178	Reliable

Source : Result Primary Data Processing (Warjiyono and Hellyana, 2018)

Based on table 3, the results of the reliability test stated that 4 (four) indicators, namely Usability Quality, Information Quality, Service Interaction Quality, Visual Quality are declared as reliable and and feasible as an instrument in this study.

3.3 Linier Regression Test

Table 4. Recapthe result of linier regression test analysis

Variable	KefisienRegresi	T-Hitung	T-Table	sig.
Konstanta	-0.432			
UQ	0,024	2,513	1,661	0,013

Variable	KefisienRegresi	T-Hitung	T-Table	sig.
IQ	0,082	5,538	1,661	0,000
SIQ	**0,018**	**-0,060**	**1,661**	**0,952**
VQ	0,127	5,715	1,661	0,000

Source : Result Primary Data Processing (Warjiyono and Hellyana, 2018)

Based on table 4, the results of linear regression test revealed that the relationship between Usability Quality with User Satisfaction (user satisfaction) with the value of TH = 2.513 and sig 0.013 has a significant relationship. Next is the relationship between Information Quality with User Satisfaction (user satisfaction) with the value of TH = 5.538 and sig 0,000 otherwise have a significant relationship. Furthermore, Visual Quality with User Satisfaction (user satisfaction) with the value of TH = 5.715 and sig 0,000 stated has a significant relationship. While the Service Interaction with User Satisfaction (user satisfaction) with the value of TH = -0.060 and sig 0.952 expressed no significant relationship.

3.4 Importance Performance Analisys

3.4.1 Performance and Interest Analysis

Table 5. WeightedIndicator

Indicator	Importance	Performance	Gap
1	3,94	3,86	0,08
2	3,87	3,68	0,19
3	4,14	3,01	1,13
4	3,90	3,82	0,08
5	3,69	3,49	0,20
6	3,66	3,51	0,15
7	3,70	3,74	0,04
8	3,84	3,84	0,00
9	3,43	3,45	0,02
10	3,58	3,44	0,14
11	3,22	3,11	0,11
12	3,30	3,35	-0,05
13	3,90	3,43	0,47
14	3,24	3,15	0,09
15	3,32	3,34	-0,02
16	3,60	3,64	-0,04
17	3,45	3,52	-0,07
18	3,39	3,49	-0,10
19	3,44	3,42	0,02
20	3,89	3,62	0,27
21	3,92	3,80	0,12
22	3,63	3,64	-0,01
23	3,91	3,80	0,11
24	3,81	3,78	0,03
Avr	3,66	3,54	

Based on table 5. Describes comparison of mean calculations of Performance values and Interest values. The average value of Performance is 3.54 while the average value of Interest is 3.66.

3.4.2 Conformity Analysis

This analysis is to know comparison of performance score with Jagalempeni Village website interest multiplied 100%. The result is the average suitability of the website of Jagalempeni Village is 96.63%. Because the level of conformity is still below 100% it is stated that the quality of the website of Jagalempeni Village has not fulfilled what is considered important by the users and the service is considered not satisfactory users of Jagalempeni Village website.

3.4.3 Gap Analysis

The gap or gap analysis is used to find out the level of quality gap of Jagalempeni Village website between current and actual perceived quality values and expected and important quality values to be developed (Importance).

Current or actual quality score (performance) is obtained from the respondent's assessment of the quality performance of the website based on the indicator Webqual while the expected and important value of quality to be developed is obtained from the respondent's assessment of the level of importance (Importance). Based on Table 5, we get the result of Qi (gap) = -0.12, because Qi (gap) is negative or <0, it is stated that the performance level of Jagalempeni Village website still not meet user expectation.

3.4.4 Cartesian Diagram

Analysis of Important Performance Analysis in the form of Cartesian diagram is used to describe the quality indicator of any website that has been in accordance with the wishes of users and anywhere that has not met the wishes or satisfaction of website users are divided into four quadrant.

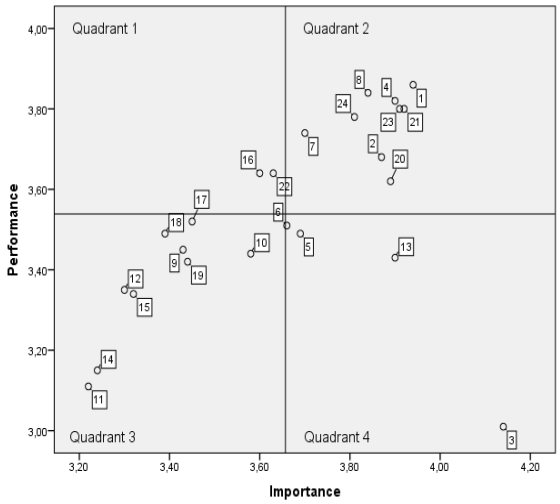


Fig. 2. Cartesian Diagram

Based on figure 3, it can be conluded :

1. Quadrant 1
   Atribut Attributes that are in quadrant 1 are attributes that have a high level of importance or expectation but low performance levels. Attributes that enter in quadrant 1 has a top priority or very important for immediate improvement or website development to improve user satisfaction Jagalempeni Village website. Attributes that go into quadrant 1 are attribute 16 = website has a good reputation, and attribute22 = questions, feedbacks and complaints will be accepted and processed as promised.
2. Quadrant 2
   Attributes that are in quadrant 2 is an attribute that has a high level of importance or expectations and a good level of performance according to the expectations of users of Jagalempeni Village website. So it must be maintained to maintain the quality of the website. Attributes that go into quadrant 2 are attribute 1 = the website is easy to operate, attribute 2 = website user interaction is clear and understandable, attribute 4 = website easy to use, attribute 7 = website conveying village competence information, attribute 8 = website creates a positive experience for users, attribute 20 =website gives space for community, attribute 21 =website makes it easy to communicate with the organization, attribute 23 =website using the appropriate letters, and attribute 24 =website using attractive colors and styles.
3. Quadrant 3
   Attributes that are in quadrant 3 are attributes that have low importance and level of performance. This attribute is deemed to have been suitably developed and not a top priority for Jagalempeni Village website improvement.
   Attributes that go into quadrant 3 are attribute 9 = website provides accurate information, attribute 10 = website provides reliable information, attribute 11 website gives timely information, attribute 12 = website provides relevant information, attribute 14 = website gives detail information, attribute 15 =website provides information in proper format, attribute 17 =User feels safe to transact, attribute 18 =Users feel secure personal information, and attribute 19 =website creates space for personalization.
4. Quadrant 4
   Attributes that are in quadrant 3 are attributes that have low importance but high performance level. This attribute is considered to have exceeded user expectations and can be ignored for not repairing the website of Jagalempeni Village.
   Attributes that go into quadrant 4 are attribute 3 = User easy to navigate, attribute 5 = website has an interesting look, attribute 6 = Design website according to Jagalempeni Village, and attribute 13 = Website makes it easy to understand information

4. Conclusions

Based on result of research and result of analysis of website data of Jagalempeni Village by using Webqual 4.0 method and Important Performance Analysis (IPA), can be concluded as follows:

1. The results of the Jagalempeni Village website quality analysis show that the suitability level of Jagalempeni Village website is 96.63% it is stated that the quality of Jagalempeni Village website has not fulfilled what is considered important by the users and the service is considered unsatisfactory the Jagalempeni Village website user.

2. The average value of gap or gap of Jagalempeni Village website is -0.12, because the gap is negative or <0 it is stated that the performance level of Jagalempeni Village website still not meet user expectation and need improvement.
3. The result of the analysis by using Important Performance Analysis (IPA) diagram it can be stated that the indicator or attribute which for the immediate repair and development of Jagalempeni Village website is attribute number 16 that is website has good reputation and attribute number 22 that is question, input and complaints will be accepted and processed as promised. These two attributes should be a top priority for improvement in the near future in order to increase the user satisfaction of Jagalempeni Village website.
4. Attributes are not a top priority for improvement but in the future it can be a consideration for the quality of Jagalempeni Village website, the website provides accurate information, the website provides reliable information, the website provides timely information, the website provides information relevant, the website provides detailed information, the website provides information in the right format, the user feels safe to transact, the user feel secure personal information and the website creates space for personalization..
5. Hope from this research hopefully the result can give positive contribution to website of Jagalempeni Village to become better, qualified so that have competitiveness, and pride for the people of Jagalempeni Village

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