

Website Satisfaction Analysis Using Usability Scale System in Cilongok District Office

By Sarah Astiti

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Abstract

Indonesia is a country with a number of governmental areas where there are 416 districts, 98 cities, 7,094 sub-districts, 8,490 sub-districts, and 74,957 villages in Indonesia. website-based, but there are still problems with the satisfaction of the services used by users or the community. Basically, all website-based information services must be in tune with the needs of what users will do on the website, so from this problem the researcher proposes a solution to creating website-based information services according to user requests both terms of user interface and user experience. In the existing problem, the researcher uses the system usability scale (SUS) method to find out the points that must be corrected for the convenience of using information services in Cilongok district. The SUS method is very suitable for measuring the satisfaction level of users of information-based services in Cilongok sub-district so that users feel satisfied, feel that the information is very clear and make the community more familiar with website-based information technology.

Keywords: Website, Satisfaction Level and System Usability Scale (SUS)

1 INTRODUCTION

The sub-district government office has an important role in running the government system at the sub-district level and is a key factor in the development of a sub-district in all fields. Cilongok District Office, Banyumas Regency is currently implementing website-based information technology services for administration [1]. However, the use of information technology is still limited to internal administrative activities, there are problems that are not yet optimal in information technology that can be used directly by the public to administer administrative services. From the location of research taking in the scope of Cilongok sub-district, it can explain information based on the source data from the Banyumas District Statistics Center with an area of 105.34 km² in Cilongok sub-district and there are around 195 thousand people along with data on the number of residents according to various villages in the sub-district. Associated with the existing data, the number of residents, the researcher got the decision that the importance of information technology services must be directly proportional, namely the more citizens, the more people who need information services and if there are fewer residents, the need for information technology services is still small.

The role of government is one that influences the success of the information technology service website to the public. If you pay attention to the low usage and problems with the level of satisfaction, it is necessary for researchers to measure user satisfaction using the system usability scale (SUS) questionnaire method. This is also in line with the mandate of the Government Instruction (2003) which explains that the government is expected to carry out changes in the system on an ongoing basis to deal with the dynamic pattern of community life and adapt to the needs of society. So that researchers measure the level of satisfaction using a system usability scale questionnaire is run to find out how effective, efficient and satisfying a website is in accordance with user requests [2].

From the problems that exist in the existence of information technology services that have been implemented on the website portal with the web address www.cilongokkec.banyumas.go.id, the government and related parties must know the benefits of having a website that is tailored to the needs of the community to obtain information quickly and easily, where at this time information has become a necessity for society, because information has a very important role and determines to achieve a goal of the organization.

However, in the application of website-based information technology services there are still some problems found during observation from direct observation on the object of research, among others: the functionality of some of the features that are not optimal, how much society cares about website-based information services, with the appearance or interface from the website is less attractive, there has never been a measurement of the level of maturity and satisfaction in website-based information technology services and based on the results of interviews with employees who have the role of head of government affairs, researchers obtain information on problems in human resources specifically in the management of information technology services. 3].

In the problems that occur after observations and researchers get some information, there is no measurement of the level of user satisfaction with information technology services at the Cilongok District office, the researcher uses the System Usability Scale to find out how satisfied the level of information technology service satisfaction is in accordance with the functional features provided by the system. government information [4]. Methods for evaluating information technology services require accuracy that is tailored to the objectives of information technology services.

This researcher conducts usability evaluations which are useful to find problems in the interface and to improve the quality of information system technology services. Usability evaluation also serves to determine the extent to which information systems are easy and fun to use by users. Previous research entitled Website Usability Testers using a system usability scale (SUS) conducted by Ika Aprilia H, N, P. Insap Santoso, and Ridi Ferdiana, research conducted in 2015.

Researchers can find problems that are still low at the level of usage site. The Tegal municipal government website points to the need to test or measure usability. By using the standard usability system formula, the researcher is able to measure the satisfaction value given by the user and get the results from 30 respondents with an average value of 61.33, it can be categorized as a system usability scale. on the website of the City Government of Tegal it is already good [2].

Previous research entitled Use of the Usability Scale System as an Evaluation of the 2018 Mobile News Website conducted by Abdurrahman, S.Sn, .M.Ds. Researchers have had problems testing the validity and reliability of which there are drawbacks to any mobile news site. With 10 questionnaire questions for 55 people, from the existence of the questionnaire, Cronbach's alpha value was 0.847, so that the mobile news website can be said to be accepted [5].

2 RESEARCH METHODS

In this method, researchers use the System Usability Scale (SUS) is a questionnaire that can be used to measure the usability of a computer system according to the user's subjective point of view (Brooke, 2013). SUS was developed by John Brooke since 1986. Until now, SUS has been widely used to measure usability and has shown several advantages, including: (1) SUS can be used easily, because the result is a score of 0–100 (Brooke, 1996); (2) SUS is very easy to use, does not require complicated calculations (Bangor et al., 2009); (3) SUS is available free of charge, does not require additional fees (Garcia, 2013); and (4) SUS is proven to be valid and reliable, even with a small sample size (Tullis and Stetson, 2004; Brook, 2013) [5].

SUS is a questionnaire consisting of 10 question items (Brooke, 1996) as shown in Table 1.0

Item	Item Question
R1	I feel that I often use the Cilongok district service website?
R2	I find it complicated when using the Cilongok sub-district service website, even though it can be made simpler and more effective?
R3	I feel that the Cilongok sub-district service website can be found easy to use?
R4	When I use this Cilongok sub-district service website, do I still need other people's help?
R5	While using the Cilongok district service website system, I still find some features that are not working properly?
R6	I feel a lot of inconsistent things from the content, news updates, etc. on the Cilongok district service website?
R7	I feel someone else when using and learning this Cilongok sub-district service website quickly?
R8	I found that there are some practical features in using the Cilongok district service website?
R9	I am very confident and do not feel confused when using the Cilongok district service website?
R10	I have to learn a few things first before I use this Cilongok district service website?

The SUS questionnaire uses a 5-point Likert scale which greatly affects the results of the user assessment of website-based information services. Respondents were asked to give ratings of "Strongly Disagree", "Disagree", "Neutral", "Agree", and "Strongly Agree" on the 10 items of the SUS statement according to their subjective assessment. If the respondent feels that he has not found the right response scale, the respondent must fill in the midpoint of the test scale (Brooke, 1996). Each statement item has a contribution score. The contribution score for each item will range from 0 to 4. For items 1,3,5,7, and 9 the contribution score is the position scale minus 1. For items 2, 4, 6, 8, and 10 the contribution score is 5 minus positions. Multiply your total contribution score by 2.5 to get the overall system utility score. SUS scores range from 0 to 100 (Brooke, 1996). The following is the formula for calculating the SUS score:

Skor SUS =	$\frac{((R1-1)+(5-R2)+(R31)+(5R4)+(R5-1)+(5-R6)+(R7-1)+(5R8)+(R9-1)+(5-R10))*2.5}{((4-1)+(5-4)+(3-1)+(5-3)+(4-1)+(5-3)+(3-1)+(5-2)+(2-1))*2.5} = 60$
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Table 2.0 SUS calculation formula

The overall SUS score can be obtained from the average SUS score individually and as a website user. The SUS questionnaire was distributed through whatsapp social media and several Facebook forums for the Cilogok sub-district community to users of the Cilogok sub-district government website. The questionnaire was filled out online using Google Forms which must be filled in by respondents [6]. Questionnaires were distributed for approximately 1 to 2 months, namely the research distributed questionnaires from 8 October 2020 to 8 December 2020. The sample used in this study was 64 people who used the Cilogok district office website because the appropriate sample size in the study ranged from 30 respondents up to 500 respondents.

3 RESULTS AND DISCUSSION

From the questionnaire responses conducted by researchers to users of the Cilogok district website, data was obtained from 64 respondents who came from various elements of society, both young and old as well as the government sector, teachers and organizations in each village. The results of the questionnaire can then be calculated using a predetermined formula to obtain a SUS score. The results of the SUS score assessment can be displayed in table 1.0. The results showed that the SUS score on the information system website Cilogok District Office was 60. The following is table 3.0 of the results of the research on filling out the questionnaire conducted by the community:

Responden										
P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	SKOR SUS
4	3	3	1	3	3	3	3	3	2	28
3	1	4	2	1	1	3	5	3	2	25
4	1	4	1	1	1	4	5	5	1	27
3	1	3	2	1	1	3	5	3	1	23
4	1	4	2	1	1	4	5	4	1	27
3	1	4	2	2	1	3	5	3	2	26
4	1	4	2	2	2	4	4	4	2	29
4	1	4	2	2	2	4	4	3	2	28
4	1	4	1	1	2	4	4	3	1	25
3	1	4	2	1	2	4	4	4	2	27
3	1	4	2	1	2	5	4	5	2	29
4	1	5	2	1	2	4	4	3	2	28
3	1	4	2	1	2	5	5	4	2	29
3	2	4	1	1	1	5	5	3	2	27
3	1	3	3	2	1	5	5	4	1	28
3	2	4	2	2	1	4	3	3	2	26
3	2	3	1	1	1	4	4	4	1	24

4	1	4	1	1	1	3	5	3	2	25
3	1	4	1	1	1	4	5	4	2	26
4	1	4	3	1	2	3	4	5	1	28
3	1	5	2	1	2	4	4	5	2	29
4	2	4	2	1	2	4	4	3	1	27
3	1	4	2	2	2	4	4	4	2	28
3	1	4	1	1	2	3	4	3	2	24
4	1	4	2	2	2	4	5	4	1	29
3	1	4	1	2	1	4	3	3	2	24
2	2	5	1	2	1	3	4	4	2	26
3	1	4	1	1	1	4	5	3	2	25
4	2	5	1	1	2	4	5	4	2	30
3	1	4	2	1	2	4	5	5	2	29
4	2	4	2	1	1	4	5	5	2	30
3	2	5	3	1	1	5	4	5	3	32
4	1	4	1	1	2	5	4	4	2	28
3	1	4	1	1	2	3	4	4	2	25
4	1	4	1	2	2	5	4	4	1	28
3	1	5	1	2	2	4	4	5	2	29
4	1	4	1	1	2	5	5	5	1	29
4	1	5	2	2	2	4	4	5	2	31
3	2	4	1	2	2	4	5	4	1	28
3	1	5	1	2	1	4	5	4	2	28
4	1	4	1	2	1	4	5	4	1	27
4	1	4	1	1	1	4	5	3	1	25
3	2	5	2	1	2	4	4	5	3	31
4	2	4	1	1	1	5	4	3	2	27
3	1	3	1	1	1	5	4	4	1	24
4	1	5	1	1	1	3	4	4	2	26
4	1	4	1	1	1	5	4	4	2	27
5	1	4	1	2	2	5	5	4	1	30
5	1	4	2	2	2	5	5	3	2	31
5	1	4	2	2	1	4	4	4	1	28
4	1	5	1	2	1	4	5	4	2	29
4	1	4	1	2	2	4	5	5	2	30
3	1	5	1	1	1	4	4	5	2	27
3	1	4	1	1	1	4	4	5	2	26
4	1	4	1	1	1	4	4	4	1	25
4	1	4	1	1	2	5	4	4	2	28
3	2	3	1	1	2	5	5	4	2	28
4	1	5	1	2	2	5	5	4	2	31
3	2	5	2	3	2	5	5	3	1	31
4	1	5	1	2	2	5	5	4	2	31
4	1	5	1	2	2	5	5	4	1	30
5	1	5	1	2	2	5	5	4	2	32
4	1	4	1	2	1	4	4	4	1	26

1. Test the validity

Researchers tested the validity using SPSS on the answers to the questionnaire from 64 respondents. The results of the validity test can be shown in table 4.0

Rhitung		Rtabel	4. Keterangan
R1	1	0.242	Valid
R2	0.999	0.242	Valid
R3	1	0.242	Valid
R4	0.999	0.242	Valid
R5	0.999	0.242	Valid
R6	0.999	0.242	Valid
R7	1	0.242	Valid
R8	1	0.242	Valid
R9	0.999	0.242	Valid
R10	1	0.242	Valid

The validity test used Pearson (2 tails) with a significance level of 5%. The results of the validity test using SPSS all of the 10 questionnaire questions regarding the system usability scale or measuring the level of satisfaction can be considered valid if Rhitung > Rtabel, with Rtabel of 0.242. Table 2 shows that the Rhitung on item 10 questionnaire questions is greater than R table, so that the 10 questionnaire items are valid.

2. Test reliability

The reliability test uses Cronbach's Alpha, from the existence of these results will then be considered realistic if the value is more than 0.7. The reliability test carried out using the SPSS application software can be shown in table. The results show that Cronbach's alpha value for the 10 item questionnaire questions is 0, 975. From the results, the Cronbach's alpha value is greater than 0.7 so this questionnaire is considered reliable.

3. Analysis of SUS scores

System usability scale is a global assessment of various aspects of usability (effectiveness, efficiency, and satisfaction) subjectively felt by users. The SUS score can indicate the level of acceptance by the user, if the SUS score is more than 70 to be included in the Acceptable category. From what the researchers did on the information system website of the Cilongok sub-district office, the SUS score of 59.4 was included in the marginal low category as shown in Figure 1.3. The SUS score is considered good if it has a value of more than 70.4 The SUS score on the information system website of the Cilongok sub-district office is in the Ok category as shown in Figure 2.0

Tabel 3 Realibility test result

Cronbach's Alpha	N items	Detail
0.975	10	Reliable

In this study, it refers to the standard system usability scale in explaining the questionnaire questions, so that it can show the system usability scale process and then produce validity and reliability calculations.

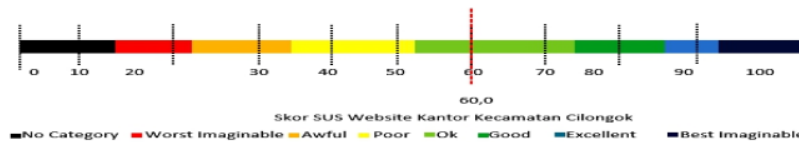


Figure 1.0 The level of website acceptance based on the SUS score of the Cilongok sub-district government website according to Brook (2013).

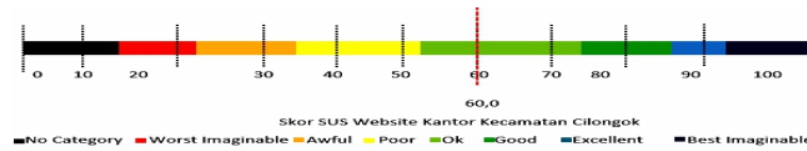


Figure 2.0 Adjective value of the SUS score for the Cilongok district government website according to Bangor et al. (2009).

The study (Sauro, 2011) also explains the SUS score category, to get the A predicate, it must be in line with the SUS score obtained from the questionnaire. On the website of the Cilongok district office information system, this value of 60 shows that it is only included in the C predicate as shown in Figure 3.0

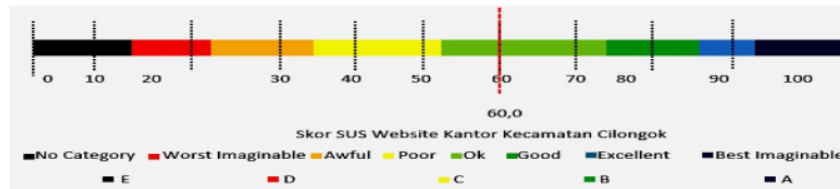


Figure 3. SUS grade scores on the Cilongok sub-district office website according to Sauro (2011).

The SUS score can also show the tendency to become a net promoter (Sauro, 2011). Whereas an SUS score of 82 or more indicates a user has the potential to become a promoter, while an SUS score of 67 or less indicates a potential deductor, a SUS score of the Cilongok sub-district office website of 60 indicates that the user has the potential to become a deductor. This could result in a massive decrease in the number of users. The SUS score of the Cilongok sub-district office website illustrates the user's subjective assessment that the website is less effective, efficient, and satisfying for users or the general public.

4 SUMMARY

2

The results of the measurement of the level of satisfaction on the district office information system website are the first step in the evaluation process of the local government website. The SUS score on the Cilongok sub-district office website is 60 which shows that the Cilongok sub-district office website is usable, even users or the general public have the potential to increase if it is made regular improvements, so that it can have a positive effect on the number of users. This can indicate that the website needs to be evaluated and carried out further development.

5 SUGGESTION

The results of the research that has been carried out should be developed by conducting further research to identify problems that are too complex and cause a decrease in the number of users. This needs to be done because the system usability scale (SUS) is not diagnostic, so it needs another evaluation method to identify other problems.

THANK YOU NOTE

In this study, he said to several parties, both from the Cilongok sub-district government who had provided information and to the lecturers who had provided directions for this research, it made research useful for various parties or agencies.

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