Evaluation of Metro City Government Website Using WEBUSE Method

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ABSTRACT—**Metro City is one of the Madya Cities in Lampung Province which has the goal of "The Realization of an Educated, Healthy, Prosperous and Cultured Metro City". To balance this goal, a facility is needed which is expected to help the community and the government to be able to find and provide information easily and clearly. Metro City has tried to build a forum so that its people can get information easily and clearly, as evidenced by the existence of a metrokota.go.id page. However, the problem is that many people in Metro City and its surroundings do not yet know the benefits or functions of the website. This is evidenced by the data of respondents filling out the questionnaire from the percentage of 100% who are natives of Metro City, only 26.8%. So with this basis the Metro City website must be evaluated to find out the shortcomings of the website. This research refers to the Website Usability Evaluation (WEBUSE) approach to determine the results of the usability evaluation on the Metro City Government website with 4 categories of assessment, namely Content Organization and Readability, Navigation And Link, User Interface Design, Performance And Effectiveness. The WEBUSE method used focuses on the development of a web-based usability evaluation system with a subjective action approach that involves the participation of Metro City Government website users to provide an assessment of their website. The purpose of this study is to evaluate whether the Metro City Government website can provide optimal service to users. After measuring WEBUSE, the Metro City Website of the 4 variables measured, in Content organization and readability produces a value of 0.654 "Good", Navigation and link got a value of 0.663 "Good", Performance and effectiveness produces a value of 0.667 "Good", while in user design The interface gets a "Moderate" result with a score of 0.560.**

Keywords—WEBUSE, Metro City, Website

I. INTRODUCTION

1.1 Background

Advances in information and communication technology provide many benefits to society. The website is one of the means of information for the entire general public. For that we need a website that focuses on the web appearance of its functionality. So that it can provide the information needed by users on the website and also user satisfaction with the appearance of the website is very important.

Metro City Government has quite good prospects in the fields of Education, Trade and Agriculture through the Vision and Mission of Metro City, namely "The Realization of an Educated, Healthy, Prosperous and Cultured Metro City". For this reason, Metro City has created a website with the address metrokota.go.id. as a means of information. Metro City has implemented website-based information technology in order to achieve the goals and objectives of the Metro City Government, namely to disseminate information. A test is needed to determine the usability and the results of the assessment can be used as a reference to determine the level of user satisfaction.. The method used in this research is WEBUSE.

WEBUSE is a method used to evaluate a website from the usability aspect on all types of web and domains [1]. This model aims to determine the extent of studying the level of ease of the system, the use of a system in helping a problem. [2]. WEBUSE method used to evaluate web or sites focusing on a web-based evaluation system have as many as 24 questions for evaluate the usability of the site [6].

In general, the success of developing a website can be measured based on usability. Usability refers to how users can learn and use a website to achieve its goals and how satisfied they are with its use. The usability level determines whether the website is accepted by the user and used in the long term, so there needs to be an evaluation of the usefulness of the Metro City website.

1.2. Topics and Limits

Based on the background that has been described, the topics/problems in this research are: How are the results of website evaluation using the WEBUSE method?. This study uses the WEBUSE method approach in evaluating usability on the Metro City Government website with dimensions Content Organization and Readability (COR),

Navigation and Link (NAL), User Interface Design (UID) and Performance and Effectiveness (PAE).

1.3. Purpose

The research has the aim of evaluating the quality of the current Metro City website in terms of usability using the WEBUSE method to determine the usability level of the website.

II. RESEARCH METHODS

As mentioned above, web measurement is carried out using the (WEBUSE) method. Web Usability Evaluation Tool is a usability evaluation method whose assessment is web-based using a questionnaire so as to allow evaluators to assess the usability of the website to be evaluated. [3]. WEBUSE is used to test the usability of the website so that it is known the value and level of website usability to be evaluated [4]. WEBUSE is one indicator of the success of a website when there is interaction between users in doing something with the website [5].

To evaluate a site using the WEBUSE method, which focuses on a web evaluation system, there are 24 questions created to evaluate the ease of use of the site. The WEBUSE method can evaluate the ease of use of all types of sites and spaces. The data analysis tool uses descriptive statistics. This shows that WEBUSE can be used to evaluate ease of use on the Metro City website. The 4 categories in the WEBUSE Method are, Content organization and readability (COR), Navigation and links (NAL), User interface design (UID), and Performance and effectiveness (PAE) [7].

1. Content, Organization & Readability

Great substance is content that is easy for clients to understand, clear and efficient. A well-organized site can give clients a quick understanding. In the meantime, site clarity is estimated through whether the framework is working effectively and providing the right data.

2. Navigation & Links

The strategy used to adequately and proficiently view and access data on the site to assist the site's clients is called Navigation. Meanwhile, combine the capacity to associate clients by selecting and clicking join on the hypertext page (landing page), which causes the launch of a new page. A good connection should use text rather than design so that it is easy for the client to do.

3. User Interface Design

UI configuration is a strategy and method that requires careful thought when planning and developing a site. The essentials of planning a UI configuration include setting goals, deciding on a client and delivering valuable substance. In order to guarantee the best results, it is necessary to consider various UI configuration issues and good execution for the client.

4. Performance & Effectiveness

Site execution can be estimated by how fast the site acts in a given cycle or exchange resulting in fast and effective client execution. For a while, feasibility is the site's achievement to create the right data for the client [8].
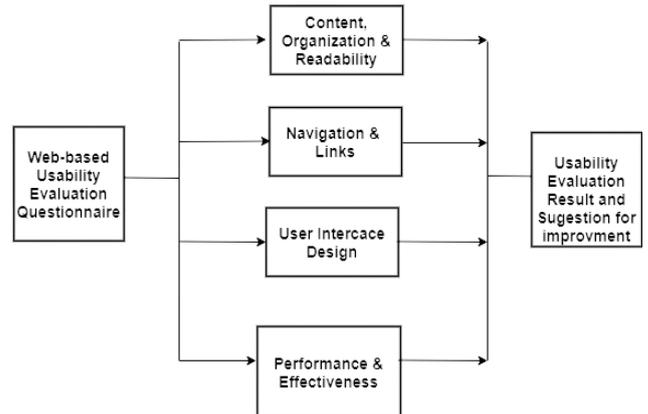

Figure 1. *WEBUSE* Evaluation Progress [6].

From the WEBUSE questionnaire, there are values that can represent how well the level of usability of a website is. The value is divided into 5 ranges of values, each value representing the level of good or bad usability. The merit value of the WEBUSE questionnaire can be seen in table 1.

Table 1. Merit score weight table [8].

Choice	Merit
Strongly Disagree (STS)	0.00
Disagree (TS)	0.25
Neutral (N)	0.50
Agree (S)	0.75
Strongly Agree (SS)	1.00

Then based on 4 categories of use, the average value for each category is considered as the point of use for each category. Points in category x are defined as follows:

$$x = \frac{[\sum (\textit{Weight of each question from each category})]}{\textit{number of question}}$$

Description :
x = *Poin usability*
$\sum$ = The total number of merits for each question from the category.

WEBUSE evaluation results in the form of usability points based on the response to each question given to the user. Usability assessment based on WEBUSE consists of several levels which can be seen from the calculation of usability points. Table 2 shows the point of use usability and the level of use usability.

Table 2. Poin dan *Level Usability Website* (WEBUSE) [9]

Poin	Level Usability
$0 \leq x \leq 0.2$	Bad
$0.2 \leq x \leq 0.4$	Poor
$0.4 \leq x \leq 0.6$	Moderate
$0.6 \leq x \leq 0.8$	Good
$0.8 \leq x \leq 1.0$	Excellent

Table 3. Questions on the WEBUSE

NO	Question	Value				
		1	2	3	4	5
COR 1	Does the website contain interesting material and topics and is always updated?					
COR 2	Do you find it easy to find what you want on the website?					
COR 3	Is the content on the website well organized and neat?					
COR 4	Do you find it easy to read the contents of the website at this time?					
COR 5	Do you feel comfortable and familiar with the language used on the website?					
COR 6	Don't you need to scroll left and right when reading the website content?					
NAL 1	Do you find it easy to know the position / whereabouts of various information when browsing the website?					
NAL 2	Does the website have instructions and links that make it easier for you to get the information you want?					
NAL 3	Do you find it easy to browse websites using existing links or the back button in the browser?					
NAL 4	Are the links on the website well maintained and unchanging?					
NAL 5	Will you be directed to a new tab when browsing the information contained on the website?					
NAL 6	Is the placement of links or menus arranged in a standard and easily recognizable manner?					

UID 1	Is the website interface design attractive and attractive?					
UID 2	Do you feel comfortable with the color combinations used in the website?					
UID 3	The website does not contain annoying features such as advertisements, scrolling or blinking text and repetitive animations ?					
UID 4	Does the website have a consistent and unchanging appearance?					
UID 5	Does the website not contain too many web advertisements?					
UID 6	Is Website Design interesting and easy to learn how to use?					
PAE 1	Don't you have to wait too long to download a file or open a page?					
PAE 2	Do you find it easy to distinguish links that have been and have not been visited?					
PAE 3	Can you easily access this website all the time?					
PAE 4	The website responds in line with expectations for all actions taken ?					
PAE 5	I feel efficient when using the website to find out various information on the metro city?					
PAE 6	The website always gives a clear and useful message when I feel like I don't know how to process something?					

III. RESULTS AND DISCUSSION

The WEBUSE questionnaire was distributed to 41 respondents who accessed the Metro City Government website. The questionnaire was conducted online via a shared link. The results obtained in Table 4.

Table 4. WEBUSE Question Results

	SS	S	N	TS	STS
COR 1	3	23	11	4	0
COR 2	3	19	14	5	0
COR 3	5	22	10	3	1
COR 4	4	23	12	1	1
COR 5	4	25	11	0	1

COR 6	2	23	11	4	1
NAL 1	3	21	12	4	1
NAL 2	3	26	10	2	0
NAL 3	3	25	13	0	0
NAL 4	2	24	14	0	1
NAL 5	3	25	10	2	1
NAL 6	3	24	11	2	1
UID 1	4	16	8	8	5
UID 2	4	11	12	9	5
UID 3	7	16	9	6	3
UID 4	4	16	11	5	5
UID 5	9	13	10	6	3
UID 6	5	14	11	6	5
PAE 1	4	15	20	2	0
PAE 2	3	27	9	2	0
PAE 3	3	22	16	0	0
PAE 4	2	26	10	3	0
PAE 5	2	22	17	0	0
PAE 6	4	25	11	1	0

Description:

SS : Strongly Agree

S : Agree

N : Neutral

TS : Disagree

STS : Strongly Disagree

The results of the table above are sourced from 41 respondents consisting of 26.8% of people in Metro City, 73.2% of people outside Metro City. With educational background 4.9% Master, 51.2% Bachelor, 36.6% Diploma and 7.3% High School. The types of work of the respondents also varied, consisting of 34.1% private employees, 12.2% teachers and 53.7% with other types of work.

In this study, the method used is the WEBUSE method where the results of the questionnaire will be converted into the form of merit [10].

The next stage is to process the data from the WEBUSE questionnaire where the results obtained are Table 5 below.

Table 5. Usability Rate Results

No	Variable Name	Skor	Results
1	Content, organization and readability (COR)	0.654	Good
2	Navigation and link (NAL)	0.663	Good
3	Desain user interface (UID)	0.560	Moderate
4	Performance and effectiveness (PAE)	0.667	Good

From the table, the results of the values of the 3 variables get "Good", while the User Interface Design results get "Moderate" with a score of 0.560 from all respondents to the Metro City Government website.

After conducting an assessment on the website which is an effort to improve the usability of the Metro City Government website. Ratings are useful for making the website easy for users to use and increasing user satisfaction. The Metro City Government website has something that attracts users, among other things, the writing style is simple and easy to follow. In addition, it has value as a provider of up-to-date information and news.

The conclusions that can be drawn from the research conducted are as follows.

1. The highest result obtained for the WEBUSE method for the category (PAE) Performance and effectiveness is 0.667 and is included in the "Good" Usability Level.

2. The UID category is rated with the "Moderate" Usability Level category.

The results of the UID that get a "Moderate" value for the future Metro City Government can make improvements in arranging the UI so that it can be liked by website users.

IV. ACKNOWLEDGMENTS

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