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IMPLEMENTATION OF ANALYSIS OF THE MC CALL MODEL ON THE WEBSITE OF LUBUKLINGGAU CITY LIBRARY AND ARCHIVES SERVICE

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ABSTRACT

The library is used to find references and information. The problem faced is that some libraries do not yet have an online Web-based system to find sources of learning information. Technological developments are expected to provide benefits for library management. The background of this research is that libraries are expected to be able to take advantage of the technological developments in web-based systems to find sources of learning information. Technological developments are expected to provide benefits for library management. The background of this research is that libraries are expected to be able to take advantage of technological developments. By using the McCall method, the website, which is in the library and archives office in the city of Lubuk linggau, will assist the community in finding references and information optimally to meet their needs. The purpose of this study was to find out how the McCall Model was implemented and what percentage of people used the Infinite website for the library and archives service in the city of Lubuk linggau. Researchers used a quantitative approach with the McCall analysis version. Then this study uses two stages: the first is an instrument test technique in the form of a validity and reliability test, and the second is software quality. The McCall model technique is operational in software programs (product operations), with several quality factors, namely truth, reliability, usability, integrity, and efficiency. The results of this study are the measurement process using the MC call method involving 60 respondents, and the measurement results of this analysis obtain a total quality percentage. Corerecnes: 60.1% (good) Reliability: 50.1% (good enough) Usability is 60.1% (good), integrity is 99.6% (very good), and efficiency is 69.6% (good).

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1. INTRODUCTION

The use of information and communication technology has now become an effective and efficient way to convey information to the public. We can get various technological advances easily; even information is one of the basic needs besides clothing, food, and shelter. The use of information technology has positive impacts

such as facilitating long-distance communication, obtaining information, and human work. Almost all organizational activities today have been entered into by information technology applications.[1]Information technology can be defined as a combination of computer and telecommunications technology with other technologies such as hardware, software, databases, network technology, and other telecommunications equipment.[2] Furthermore, information technology is used in organizational information systems to provide information for users in the framework of decision-making. The website is one of the most widely used resources on the internet. Where the website provides a source of data and information that can be accessed by everyone via the internet. By using browser software such as Internet Explorer, Mozilla Firefox, Opera Browser, or Google Chrome. By using this facility, users can explore all information and world news. Software quality testing is a process used to identify the accuracy, completeness and quality of software[3].

Based on these facts, users generally give a subjective assessment that the website is no longer worth visiting. If this happens to many users, then it is certain that the website will be abandoned by many people so that it will fail to achieve the initial goal of making the website itself.[2]The McCall model is a model that describes the Software Quality Factor or software quality.[4] The three primary views in this approach are product operation (software's operational characteristics), product revision (software's capacity for change), and product transition (software's capacity for environment adaptation). The use of a product depends on a number of variables, including correctness, dependability, usability, integrity, and usability.[5] The most extensive set of software quality criteria or factors is contained in this model. McCall's model can be used to test and ensure the quality of information system software since it has good precision and detail.[2] This research is expected to be a reference source in future system development.

Office Library Lubuklinggau city already has its own website at this time, namely http://inlislite.lubuklinggaukota.go.id. This website provides information about the Lubuklinggau city library office, such as Back Office, Read on the Spot, Guestbooks, Online Membership, Digital Collection Services, Opaque Articles, Member Registration, Statistics, Surveys, Independent Returns, Independent Borrowing, and other information. However, since the website was first created, it has never been analyzed regarding its quality, so it cannot be known whether the quality of the software is good or not. Based on the problems above, the researcher proposes a research topic to test the value of software quality, correctness factor, reliability factor, usability factor, integrity factor, and efficiency factor on the Lubuklinggau City Library website and the factors that influence them.[6]

2. METHODS

2.1 System Analysis

System analysis is the process of figuring out the specifics of what (instead of how) a given system will accomplish. To improve already-existing systems or solve unresolved issues, system analysis steps are conducted. The web is a collection of pages that show different types of static and dynamic text, data, photos, video, and/or a combination of all of these.[7] The web is a method for presenting text, images, multimedia, and other content on the internet network. It is connected to documents.[6]

2.2 MC Call method

Is one model that describes Software Quality Factor or software quality. This model has three main perspectives, namely product operation (operational properties of software), product revision (software ability to undergo changes), and product transition (software adaptability to new environments).[8]Product operation includes several factors, namely correctness, reliability, usability, integrity, and usability.[4]This method contains the most complete software quality criteria or factors. Because the McCall method has good accuracy and detail, it can be used to test and guarantee the quality of information system software.[7]Product Operation includes several factors, namely correctness, reliability, usability, integrity, and usability. Product Revision includes several factors, namely maintainability, flexibility and testability, Product Transition includes several factors, namely portability, reusability and interoperability.[9]

This method contains the most complete software quality criteria or factors. Because McCall's method has good accuracy and detail, it can be used to test and guarantee software quality.[10]

3. RESULTS AND DISCUSSION

The McCall technique and a quantitative approach are both used in this study to evaluate the Lubuklinggau website. The quantitative approach is a way of learning that employs numerical data as a tool to discover facts about what we're interested in learning. Currently, the Office Library of Lubuklinggau City has its own website at http://inlislite.lubuklinggaukota.go.id the Lubuklinggau City Library office is described on this website along with information about Back Office, Read on the Spot, Guestbooks, Online Membership, Digital Collection Services, Opaque Articles, Member Registration, Statistics, Surveys, Independent Returns, Independent Borrowing, and other topics.

3.1. System Analysis

Future system development is anticipated to use the study's findings as a reference. According to study by User Interface Engineering, Inc., individuals waste 60% of their time trying to discover the information they need on websites, which negatively affects productivity, exacerbates frustration, and results in various types of loss. Users frequently make the subjective judgment that the website is no longer worthwhile based on these factors. The website will undoubtedly lose a lot of users if this occurs to many of them, defeating the purpose for why it was created in the first place. Quantitative methods are used for research on large populations and large samples, so a survey research design is used.

3.2. Validity Test Results

Validity test is done by comparing with the provisions if r count > r table then the item is declared valid. In this study n = 60 , so df = 60 – 2 = 58, with a significant level of 0.05, an r table of 0.2542 (2-tailed) is obtained if the Pearson correlation value > the comparison value is r table , then the item is valid. Or if the value of Sig. (2-tailed) <0.05 means the item is valid. So below are the results of the validity test in the analysis.

1.	*Correctness*(X1) namely C1 0.454673 > 0.2542, C2 0.569089 > 0.2542, C3 0.577298 > 0.2542, C4 0.533929 > 0.2542. Thus all statement items for the correctness variable (X1) are declared valid.
2.	*reliability*(X2) namely R1 0.524723 > 0.2542, R2 0.572156 > 0.2542, R3 0.391186> 0.254, R4 0.526305 > 0.2542. Thus all statement items for the reliability variable (X2) are declared valid.
3.	*usability*(X3) namely U1 0.461781 > 0.2542 , U2 0.519146 > 0.2542 , U3 0.574243 > 0.2542 , U4 0.530357 > 0.2542. With Thus all statement items for the usability variable (X3) are declared valid.
4.	*integrity*(X4) namely I1 0.443885 > 0.2542 , I2 0.462534 > 0.2542 , I3 0.671585 > 0.2542 , I4 0.488795 > 0.2542 . Thus all statement items for the integrity variable (X4) are declared valid.
5.	*efficiency*(X5) namely E1 0.567906 > 0.2542 , E2 0.680838 > 0.2542 , E3 0.419557 > 0.2542 , E4 0.536298 > 0.2542 . With Thus all statement items for the efficiency variable (X5) are declared valid.

3.3 Validity Test Results

From the instrument questions analyzed with the help of the SPSS for windows version 26 computer, the reliability test results obtained Cronbach's Alpha value of 0.6, the value lies at 0.841-0.836 so it can be concluded that the value is reliable and acceptable.

Table 1 Reliability test

No	Variable	*Rxy*	*R Table*	Information
1	*Correctness*	0.841	0.2542	Good
2	*reliability*	0.841	0.2542	Good
3	*usability*	0.841	0.2542	Good
4	*integrity*	0.841	0.2542	Good
5	*efficiency*	0.841	0.2542	Good

3.3 McCall Model Results

The following is the overall result of modeling using McCall:

Table 2 Variable McCall

No	Variable Mc call	The calculation results Questionnaire
1.	*Correctness*	4 (Satisfied)
2.	*reliability*	4 (Satisfied)
3.	*usability*	4 (Satisfied)
4.	*integrity*	4 (Satisfied)
5	*efficiency*	4 (Satisfied)

The following is the calculation of the quality assessment from the Lubuklinggau Library website:

No	Variable	Question	Weight Value	Mark Criteria
1.	*Correctness (0.3)*	A. Completeness 1. The Website library in Lubuklinggau City already provides an appearance which complete and in accordance.	03	4,7
		2. Are the menus website of the library Lubuklinggau City easy enough to understand?	03	4,7
		B. Consistency 3. The Website library in Lubuklinggau City already has a consistent display design on every page?	04	4,9
		4. The Website library in Lubuklinggau City already has structured menus and clear usefulness.	03	4,1
2	*Reliability* (0.3)	C. Accuracy 5. The Website library in Lubuklinggau City can petrify performance and increase productivity users.	04	3,6
		6. The information on the Lubuklinggau City Library website is easy to understand without difficultness.	03	4,5
		D. Simplicity 7. I often find clear warnings when I make user mistakes	04	3,3

		8. The Website library in Lubuklinggau city is useful for visitors.	03	3,5
3.	Usability (0,3)	*E. Operability*		
		9. The Website library in Lubuklinggau city can in operating with ease by users.	04	4,1
		10. Very easy for users to be expecting using the website of the library Lubuklinggau City.	03	4,2
		F. Accessibility		
		11. The menu on the website of the library Lubuklinggau City is easy to understand without difficultness.	04	4,4
		12. The website link for the library of Lubuklinggau City is consistent and easy to identify.	03	4,5
4	*Integrity (0,2)*	G. Security		
		13. The website of the library in Lubuklinggau City can control user access with limited right access.	03	4,2
		14. The website of the library in Lubuklinggau City can protect data stored in the system.	03	3,6
		15. The website of the library Lubuklinggau City often appears announcement when login failed.	04	3,2
		16. The website of the library Lubuklinggau City no can be used by a person other than with the user account of each user.	04	3,4
5	*Efficiency (0.2)*	H. Execution		
		17. The Lubuklinggau City website can be accessed from all devices	03	4,2
		18. The information that the website of the library in Lubuklinggau City is presented accordingly to your needs.	02	3,9
		19. The diversity of information presented on this website is interesting for you.	02	3,9
		20. Difficulty in accessing collections book.	03	2,2

The last step after the weighting value and criterion value are determined is to determine the total value of Fa based on the quality factors that exist in McCall. The following formula is used in McCall's technique:

Fa = w1c1 + w2c2 + ... + wncn

Information :

Fa : is the total value of factor a

W : is the weight that depends on the product and importance

c : is a metric that affects the software quality factor.

Calculation of each quality factor is carried out based on predetermined criteria as follows:

1. Correctness Factor

Completenes

= (w1 x c1) + (w2 x c2)

= (03 x 4.7) + (03 x 4.7)

= (14.1 + 14.1)

= 28.2

Consistency

= (w3 x c3) + (w4 x c4)

= (04 x 4.9) + (03 x 4.1)

= (19.6 + 12.3)

= 31.9

So the Fa1 value is solved in the following way:

$$= \frac{Completeness + Consistency}{2} = \frac{28{,}2 + 31{,}9}{2} = \frac{60{,}1}{2} = 30{,}05$$

From the results obtained from the calculations, the quality factor values are converted into percentages using the equation:

Percentage $= \frac{Nilai\ yang\ di\ dapat}{Nilai\ Maksimum}\ X\ 100$

$$= \frac{30{,}05}{5}\ x\ 100$$

=60.1 %

2. Reliability Factor

accuracy

= (w5 x c5) + (w6 x c6)
= (04 x 3.6) + (03 x 4.5)
= (13.2 + 13.2)
= 26.4

Simplicity

=(w7 x c7) + (w8 x c8)
=(04 x 3.3) + (03 x 3.5)
=(13.2 + 10.5)
=23,7

So the Fa1 value is solved in the following way:

$$= \frac{Accuracy + Simplicity}{2} = \frac{26{,}4 + 23{,}7}{2} = \frac{50{,}1}{2} = 25{,}05$$

From the results obtained from the calculations, the quality factor values are converted into percentages using the equation:

Percentage $= \frac{Nilai\ yang\ di\ dapat}{Nilai\ Maksimum}\ X\ 100 = \frac{25{,}05}{5}\ x\ 100$

=50.1%

3. Usability Factor

Operability

= (w9 x c9) + (w10 x c10)
= (04 x 4.1) + (03 x 4.2)
= 16.4 + 12.6
= 29

Accessibility

= (w11 xc 11) +(w12 x c12)
= (04 x 4.4) + (03 x 4.5)
= 17.6 + 13.5
= 31.1

So the Fa1 value is solved in the following way:

$$= \frac{operability + accesibility}{2} = \frac{29 + 31{,}1}{2} = \frac{60{,}1}{2} = 30{,}05$$

From the results obtained from the calculations, the quality factor values are converted into percentages using the equation:

Percentage $= \frac{Nilai\ yang\ di\ dapat}{Nilai\ Maksimum}\ X\ 100$

$= \frac{30{,}05}{5}\ x\ 100$

= 60.1 %

4. integrity factor

security

Fa4 =(w13 xc 13) +(w14 x c14)+ (w15 x c15)+ (w16 x c16)
= (03 x 4.2)+ (03 x 3.6)+(04 x 3.2) + (04 x 3.4)
= 12.6 +10.8+12.8+13.6
= 49.8

From the results obtained from the calculations, the quality factor values are converted into percentages using the equation:

Percentage $= \frac{Nilai\ yang\ di\ dapat}{Nilai\ Maksimum}\ X\ 100$

$= \frac{49,8}{5}\ x\ 100$

= 99.6 %

5. **Efficiency Factor**

execution

Fa5 = (w 17 xc17)+ (w 18 x c18) + (w19 xc 19) + (w20 x c20)

= (03 x 4.2) + (02 x 3.9) + (02 x 3.9)+ (03 x 2.2)

= 12.6 + 7.8+ 7.8 +6.6

= 34.8

From the results obtained from the calculations, the quality factor values are converted into percentages using the equation:

Percentage $= \frac{Nilai\ yang\ di\ dapat}{Nilai\ Maksimum}\ X\ 100$

$= \frac{34,8}{5}\ x\ 100$

= 69.6 %

The results obtained from the 60 respondents were carried out to calculate the total percentage with the formula equation as follows:

$$Persentase = \frac{(\ Nilai\ Variabel + Nilai\ Yang\ di\ dapat\ )}{Nilai\ Maksimum}\ X\ 100$$

So the total quality (Σ) obtained is as follows:

$= \frac{(\ 03\ x\ 30,05\ ) + (\ 03\ x\ 25,05\ ) + (\ 03\ x\ 30,05\ ) + (\ 02x\ 49,8\ ) + (\ 02\ x\ 34,8\ )}{5}\ x100$

$= \frac{(\ 90,5\ ) + (\ 75,15\ ) + (\ 90,15\ ) + (\ 99,6\ ) + (\ 69,6\ )}{5}\ x100$

$= \frac{425}{5}\ x\ 100$

= 85 %

The percentage results above are then compared, namely the scale used to measure the quality of a user or a group of people about an event. The grouping of percentage levels according to the feasibility scale is in Table 4.19. it can be concluded that the website of the Lubuklinggau city library with a total is at a level between 81% - 100% = 85.% and is included in the very good category.

Based on the results of the analysis and calculation of the 5 quality factors above, the author can find weaknesses and strengths on the Library Website. Based on these deficiencies, the author can provide recommendations for website development/improvement.

a. It is recommended that Library Website managers pay attention to the appearance of the website, and make the appearance of the website more user friendly.
b. The website display is still responsive where the appearance has not adjusted to the user's screen size.
c. Training of users is very necessary, because there are several features that are not known by users. For example: there are users who suggest that there should be a feature to change passwords, even though this feature is already available.
d. We recommend that the display and layout of information on the Library Website pay more attention and rearrange it so that it makes it easier for users to understand and find what users need.
e. It is recommended that the Library Website manager provide a chat feature, so that users' needs, difficulties or questions can be responded to and resolved quickly
f. We recommend that the library website manager fill in the features that are still empty (Digital Content).
g. We recommend that the Library Website manager, review the login system, because there are several
h. According to the user's needs, for example: notification file uploaded successfully.
i. New users having trouble logging in. Apart from that there are several cases, when logging in, it takes quite a long time, because many don't know that when starting the login process you have to become a member of the library first.

4. CONCLUSION

The conclusions that can be drawn from the above analysis are:

a. Implementation of McCall's method is used to test the quality of the Lubuklinggau City Library Website (Inlislite). McCall's method can be a benchmark of 50.1% (fairly good), the value for the Usability quality factor is 60.1% (good), the value for the Integrity quality factor is 99.6% (very good), the value for the Efficiency quality factor is 69.6 % (good).
b. Overall based on McCall's quality in product operations, the Inlislite website has very good quality (scored 85%).
c. Based on the results of the research, the author concluded that there is a need for recommendations for further development of the website of library services and archivs of city Lubuklinggau.

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