Usability Evaluation of Wedding Administrative Information System Using *System Usability Scale*

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Abstract: The Marriage Administration Information System at the Religious Affairs Office of Lubuk Barumun District is a system that is run by the Admin of the Religious Affairs Office of Lubuk Barumun District and the Community in Lubuk Barumun District. The main function provided by this marriage administration information system is to facilitate the Religious Affairs office in compiling data and delivering information to the public, this system can also facilitate the public in submitting marriage requirements and reconciliation files. In using the marriage administration information system, some people are still confused in running this marriage administration information system. Therefore, this study aims to evaluate the usefulness of the marriage administration information system using the System Usability Scale (SUS) method to determine the extent of the effectiveness, efficiency and satisfaction of using the marriage administration information system that has been built.

Keywords: Evaluation, Information Systems, Marriage Administration, System Usability Scale.

INTRODUCTION

In the fast-paced industrial era 4.0 as it is today, information technology has an important role in all fields, therefore the need for a fast, precise, and accurate information system is an absolute must (Eyal Zisser, 2004). Along with the continued development of information technology, the mindset of the community is also growing, this forces all parties to be able and able to use technology as a means to improve services for its users.

The Office of Religious Affairs in Lubuk Barumun District is a government agency that provides services to the community in terms of carrying out marriages and reconciliation. The requirements for carrying out marriage and reconciliation have been regulated in the Marriage Law. Law No.1 in 1974 article 2 paragraph 2 concerning marriage reads "Every marriage is recorded according to the applicable laws and regulations"(Presiden Republik Indonesia, 1974). In the provisions of Article 28B of the 1945 Constitution of the Republic of Indonesia which reads "everyone has the right to form a family and continue offspring through legal marriage and the State guarantees the child's right to survival, growth, and development and the right to protection from violence and discrimination"(Kurniawati, 2021),(Malensang, 2017). A marriage is carried out with the aim of preventing it from violating the law (adultery and heinous acts)(Nurhadi, 2018).

At this time, the Marriage Administration at the Lubuk Barumun District Religious Affairs office has used an android-based system, in supporting the submission of marriage requirements and reconciliation files more organized, fast, precise and accurate. This system can also make it easier for a government agency to complete assigned tasks or jobs, without having to go through a complicated process, cost, and a lot of energy.

However, in using this marriage administration application, the people of Lubuk Barumun District have several difficulties. The difficulty that often occurs is that some people are still confused when they are going to run this Marriage Administration application.

Based on the problems above, an evaluation of the usefulness of the Marriage Administration Information System is needed. This evaluation is carried out as a step to assess the success of the Adroid-Based Marriage Administration Information System at the Lubuk Barumun District Office, especially in terms of usability. Usability is a measure where users can see the quality of an application, especially for software users, this is done in order to find out how easy the software is to learn and use (Raisa et al., 2018)(Ulul et al., 2019).

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In the usability evaluation to be carried out using the System Usability Scale (SUS). This SUS is an assessment that is packaged in the form of a questionnaire (Setiawan & Wicaksono, 2020). In this case it is used to measure the usability of a computer system by using the subjective point of view of a system or software user (Putri et al., n.d.). By using the Evaluation of the Usability of the Marriage Administration Information System, it is hoped that the level of reusability of the usefulness of the Marriage Administration Information System can be found so that later it can be useful as material for improvement and research for the future.

LITERATURE REVIEW

2.1 *System Usability Scale* (SUS)

System Usability Scale (SUS) is a questionnaire that can be used to measure the usability of a computer system using the subjective point of view of the user of the system itself(Samsudin, 2020),(Brooke, 2018). This SUS will later produce a number that can represent the usability of the system as a whole.

Table 2.1
Instrument comparison table

code	Original Instrument Items	Research Instrument Items
Q1	I think that I would like to use this system frequently.	I think that I will often use the marriage administration information system
Q2	I found the system unnecessarily complex.	I find this marriage administration information system complicated to use.
Q3	I thought the system was easy to use.	I find the marriage administration information system easy to use.
Q4	I think that I would need the support of a technical person to be able to use this system.	I need the help of another person or a technician when using the marriage administration information system.
Q5	I found the various functions in this system were well integrated.	I feel that the features of the marriage administration information system are working properly.
Q6	I thought there was too much inconsistency in this system.	I feel there are many things that are inconsistent / mismatched in the marriage administration information system.
Q7	I would imagine that most people would learn to use this system very quickly.	I feel others will understand how to use the Marriage Administration Information system quickly.
Q8	I found the system very cumbersome to use.	I feel that this marriage administration system is confusing to use.
Q9	I felt very confident using the system.	I feel there are no obstacles in using the marriage administration system.
Q10	I needed to learn a lot of things before I could get going with this system.	I need to get used to it first before using the marriage administration Information system.
scale	1: Strongly Disagree, 2: Disagree, 3: Neutral – neither Agree nor Disagree, 4: Agree, 5: Strongly Agree	1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree

The table above shows the SUS questionnaire questions consisting of 10 questions with 5 answer choices ranging from strongly disagree to strongly agree (Kharis et al., 2019),(Tjiptabudi, 2018). Odd questions are (1,3,5,7,9) is a positive question, while the even question (2,4,6,8,10) is a question that has a negative nature. After collecting the data taken from the respondents, then the data is calculated here. There are several provisions in the calculation of the score that must be followed. Among them:

1. Every odd numbered question, the score of each question obtained from the user's score will be deducted by 1.
2. For each question with an even number, the final score is obtained from a score of 5 minus the question score obtained from the user.
3. The SUS score is obtained from the sum of the scores for each question which is then multiplied by 2.5.

This calculation rule applies to each respondent who is given a question. The provision at the end of this score is that a score below 51 is in the "Very Bad" category, a score of 68 is in the "OK" category, while a score of 68 - 80.3 is included in the "Very Good" category.

*name of corresponding author
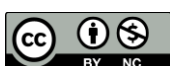
METHOD

Research Design

The method used in this research is the quantitative method, where there is quantitative data analysis on the measurement of the level of the marriage administration information system by distributing the System Usability Scale (SUS) questionnaire. Which was created by John Brooke in 1986.
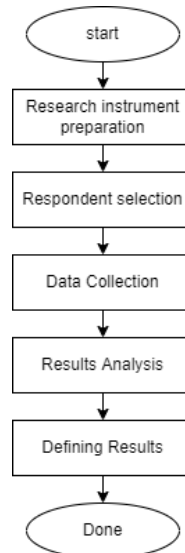

Figure 3.1 Research Stages

Data collection techniques

Data collection can be done by developing a questionnaire to the people of the Lubuk Barumun sub-district which is carried out online by using Google Froms. There are 5 assessments that respondents can choose, namely: :1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree. This Likert scale is used in measuring attitudes, opinions and perceptions of a person, or a group about social events or phenomena. The data tabulation process utilizes the Microsoft Excel application. In addition to distributing questionnaires to respondents, collecting data This is also done by means of interviews with the aim of getting information by asking questions directly.

Population and Sample

According to Sugiono (2001: 55) this population is a generalization area consisting of objects and subjects. which then has a certain quantity or characteristic that has been determined by the researcher to be studied, then conclusions can be drawn (Susilana, 2015). In this study, the population was taken from the entire community of Lubuk Barumun District, which was 20,024 in 2020(F Ginting, 2021).

Arikunto explained that the sample is part or representative of the population being studied (Hum et al., 2021). This sample was taken from a part of the population, or representatives of the study. To determine the number of samples in this study using the Slovin formula. This formula is usually used in survey research where the sample size is usually very large. This formula requires a formula to get a small sample but can represent the entire population. The Slovin formula can be seen based on the following notation:

$$n = \frac{N}{1 + Ne^2}$$

Based on the information above, n is the minimum number of samples, the value of N is the population, while the value of e itself is the error margin value. In this study, the degree of confidence of 90% or the error rate of 10% was determined so that the results obtained:

$$n = \frac{20.024}{1 + (20.024 \; x \; 0{,}1^2)}$$
$$n = \frac{20.024}{201.24}$$
$$n = 99{,}5$$

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From the Slovin formula that has been calculated above, it can be concluded that the minimum sample that can be taken for an error rate of 10% is 99,5 people. While the number of respondents who filled out the questionnaire in this study were 107 people.

RESULT

Use case Diagram of Marriage Administration Information System

This use case diagram is a diagram that works by describing the typical interaction between system users and a separate system through a way of using a system (Kurniawan, T. Bayu, 2020). Below is a use case diagram contained in the marriage administration information system:
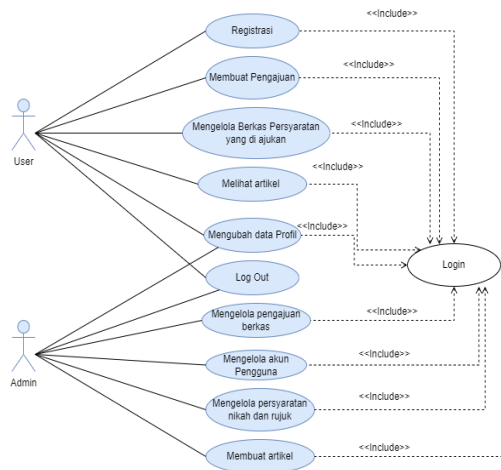

Figure 4.1 Use case diagram of marriage administration information system

In this use case, it can be seen that system users can register, make file submissions, view file requirements submitted, view articles, change data and log out. Then the next file that has been input by the user can be managed or verified by the admin of the religious affairs office of the Lubuk Barumun sub-district.

Marriage Administration Information System

The marriage administration information system at the religious affairs office of the Lubuk Barumun sub-district is an object of assessment with the SUS instrument, where this software has the main function of inputting marriage requirements files and referrals that are more organized, then this system also makes it easier for the public to see what information is provided. send by Religious Affairs office about such as marriage advice and read articles on information related to marriage and refer. The display of the marriage administration information system can be seen in the image below:

Figure 4.2 Login Page

*name of corresponding author
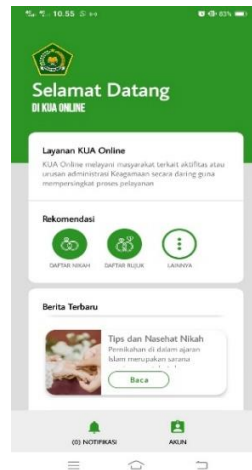
Figure 4.3 Dashboard page

In the display above, there is a Login and Dashboard menu on the Marriage Administration Information System. On the Login menu there is, input the E-Mail address and password which if the login is successful the system will direct the user to enter the dashboard. Then after successfully logging in, it will enter the menu. dashboard, on this menu there is a welcome greeting, then here there is also a menu for submitting marriage requirements and reconciliation, and finally an article sent by the Religious Affairs office admin of the Lubuk Barumun sub-district. Then when you click on the Marriage List menu and the Referral List, it will display all the places according to the category, as shown below:
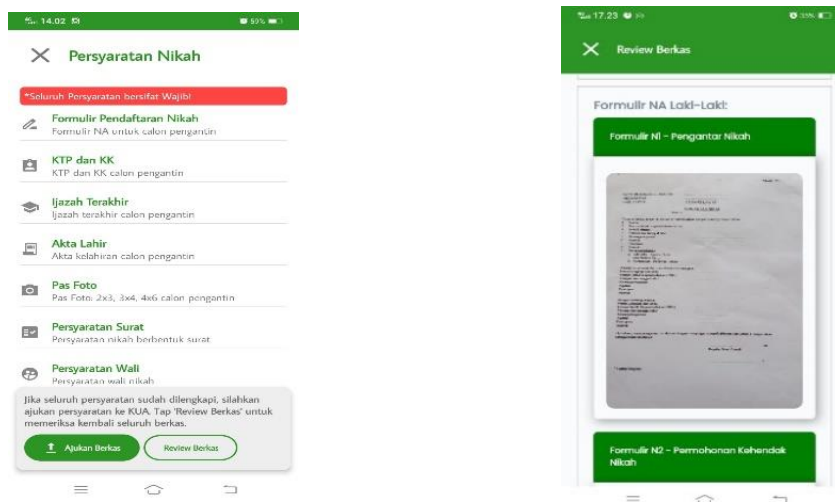
Figure 4.4 Marriage File Selection Page (left) Imported file (right)

*name of corresponding author

Figure 4.5 Referral File Selection Page (left) Imported file (right)

In the display above there is a menu of marriage and reconciliation requirements and if we click on one of these menus, all the files that will be inputted in the implementation of marriage and reconciliation will appear. Then in this view we can also see what files have been inputted.

DISCUSSIONS
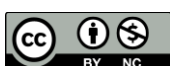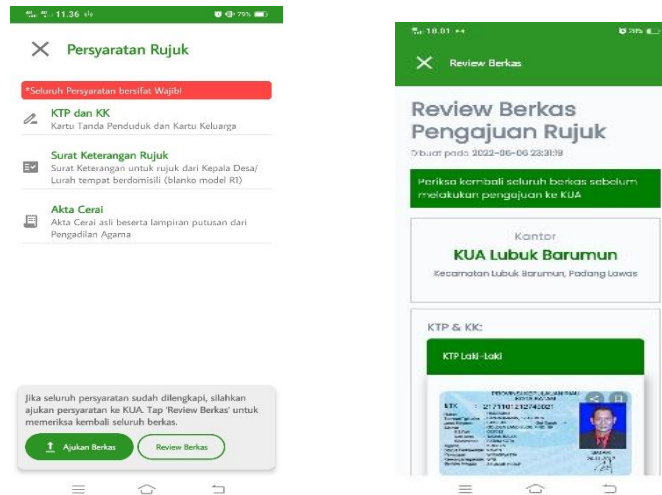### 4.1 Respondents Assessment Results

The Usability submission is done to find out how much satisfaction level of users of the marriage administration information system is. By using a questionnaire consisting of 10 questions and 5 answer choices on a Likert scale ranging from "Strongly Disagree" to "Strongly Agree".

Table 4.1
Respondents Assessment Results

| NO | RESPONDENTS | CALCULATE SCORE | | | | | | | | | | Amount | SCORE |
		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10		(Amount x 2.5)
1	R1	4	3	4	3	3	4	3	4	3	3	34	85
2	R2	4	2	3	3	4	3	3	2	4	2	30	75
3	R3	3	4	4	4	4	3	4	2	3	2	33	82,5
4	R4	3	1	4	1	4	3	2	4	3	2	27	67,5
5	R5	4	3	3	2	3	3	4	4	3	0	29	72,5
6	R6	4	3	4	4	3	4	3	3	3	2	33	82,5
7	R7	3	3	3	1	3	3	3	3	3	1	26	65
8	R8	4	3	4	1	3	3	4	2	4	4	32	80
9	R9	3	3	3	3	3	3	3	3	3	1	28	70
10	R10	2	3	3	4	4	4	3	3	3	4	33	82,5
11	R11	3	3	3	3	3	3	3	3	3	1	28	70
12	R12	2	4	4	3	4	2	4	3	4	2	32	80
13	R13	4	4	4	1	3	4	3	3	3	1	30	75
14	R14	4	4	4	4	4	2	2	3	3	3	33	82,5
15	R15	3	4	4	3	3	4	3	4	3	1	32	80
16	R16	3	3	3	3	3	3	3	3	3	1	28	70
17	R17	3	3	3	3	3	3	3	4	3	3	31	77,5
18	R18	3	1	2	4	3	2	2	3	2	1	23	57,5
19	R19	3	4	4	4	4	2	4	2	4	2	33	82,5

*name of corresponding author
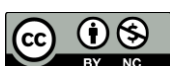
20	R20	4	3	4	4	1	4	1	4	1	3	29	72,5
21	R21	4	3	4	4	4	4	4	4	4	4	39	97,5
22	R22	2	2	2	2	2	2	2	2	2	2	20	50
23	R23	4	4	4	2	3	4	3	2	3	2	31	77,5
24	R24	4	2	4	1	4	2	4	3	4	4	32	80
25	R25	4	3	3	3	4	4	3	3	3	2	32	80
26	R26	4	3	4	4	3	3	3	4	4	4	36	90
27	R27	4	4	4	1	4	4	4	4	4	0	33	82,5
28	R28	3	3	1	3	4	3	2	2	4	4	29	72,5
29	R29	2	3	3	4	2	2	1	3	1	4	25	62,5
30	R30	4	3	4	2	3	3	4	2	4	4	33	82,5
31	R31	3	2	3	3	3	3	4	4	3	2	30	75
32	R32	4	4	3	2	4	2	2	3	2	1	27	67,5
33	R33	3	3	1	3	3	4	4	4	4	4	33	82,5
34	R34	2	4	4	3	3	3	3	3	3	4	32	80
35	R35	3	3	3	3	4	3	3	3	3	3	31	77,5
36	R36	4	4	4	3	2	2	3	3	2	2	29	72,5
37	R37	4	4	4	4	4	4	4	4	4	0	36	90
38	R38	4	2	3	2	3	2	3	3	4	1	27	67,5
39	R39	3	3	4	4	3	2	3	3	3	1	29	72,5
40	R40	1	4	4	4	2	1	3	2	4	4	29	72,5
41	R41	3	3	3	3	2	2	3	3	3	1	26	65
42	R42	4	4	4	4	4	3	4	2	3	1	33	82,5
43	R43	1	2	4	3	4	2	1	4	4	4	29	72,5
44	R44	4	4	4	4	4	4	3	3	3	4	37	92,5
45	R45	1	3	4	4	1	3	2	3	4	4	29	72,5
46	R46	3	3	4	4	4	4	4	4	2	2	34	85
47	R47	1	1	1	1	1	1	2	2	1	0	11	27,5
48	R48	1	1	2	2	3	3	2	1	4	3	22	55
49	R49	2	3	3	3	3	3	4	4	3	2	30	75
50	R50	3	3	3	2	3	3	3	3	3	1	27	67,5
51	R51	3	3	3	2	3	3	3	3	3	1	27	67,5
52	R52	2	3	3	3	4	4	3	3	3	0	28	70
53	R53	3	3	3	2	3	2	1	3	3	1	24	60
54	R54	4	0	4	0	3	1	3	1	4	1	21	52,5
55	R55	3	3	3	2	3	3	3	3	3	1	27	67,5
56	R56	4	4	4	4	4	4	4	4	4	0	36	90
57	R57	3	3	3	2	3	3	3	3	3	3	29	72,5
58	R58	3	3	4	1	2	1	0	2	3	2	21	52,5
59	R59	4	4	4	4	4	4	4	4	4	4	40	100
60	R60	3	3	3	2	3	3	3	2	3	1	26	65
61	R61	4	3	3	3	3	2	3	3	2	2	28	70
62	R62	3	3	3	4	3	1	2	4	3	2	28	70
63	R63	3	4	3	4	3	4	3	4	3	2	33	82,5
64	R64	3	3	3	2	3	3	3	2	3	1	26	65
65	R65	3	3	3	3	3	3	4	3	3	2	30	75

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66	R66	4	3	4	2	4	2	4	2	4	2	31	77,5
67	R67	3	3	3	2	3	2	3	3	3	1	26	65
68	R68	3	2	3	3	3	2	3	2	3	2	26	65
69	R69	3	4	4	4	1	2	2	4	4	1	29	72,5
70	R70	3	3	4	2	3	2	3	3	3	1	27	67,5
71	R71	4	2	3	2	3	2	3	3	3	0	25	62,5
72	R72	3	3	3	2	3	2	3	2	3	1	25	62,5
73	R73	4	3	4	3	4	3	4	3	4	0	32	80
74	R74	4	4	4	4	3	3	3	4	4	0	33	82,5
75	R75	4	2	3	1	3	2	3	2	3	2	25	62,5
76	R76	2	3	3	3	4	4	3	3	3	0	28	70
77	R77	3	2	4	2	3	2	3	2	3	1	25	62,5
78	R78	3	3	4	2	3	2	3	2	3	1	26	65
79	R79	0	4	4	4	4	4	4	4	4	0	32	80
80	R80	4	4	4	4	3	3	3	3	2	2	32	80
81	R81	3	3	3	2	3	2	3	3	3	1	26	65
82	R82	2	4	3	3	4	4	3	3	0	4	30	75
83	R83	3	3	3	2	3	3	3	3	3	1	27	67,5
84	R84	4	3	3	3	3	3	4	3	3	2	31	77,5
85	R85	2	2	2	2	3	3	3	2	3	3	25	62,5
86	R86	4	2	3	4	3	1	3	2	2	2	26	65
87	R87	4	4	4	4	4	4	4	4	4	0	36	90
88	R88	3	1	3	2	3	2	3	2	3	1	23	57,5
89	R89	2	3	3	3	4	4	3	3	3	0	28	70
90	R90	4	3	3	2	2	4	3	4	2	1	28	70
91	R91	3	2	3	2	3	2	3	2	3	1	24	60
92	R92	3	3	4	4	4	4	4	4	3	3	36	90
93	R93	3	2	3	1	3	2	3	3	3	1	24	60
94	R94	4	4	2	3	4	4	3	3	4	4	35	87,5
95	R95	3	3	3	1	3	3	3	3	3	1	26	65
96	R96	4	4	3	3	3	4	3	4	4	4	36	90
97	R97	3	3	3	1	3	3	3	3	3	1	26	65
98	R98	4	4	4	4	1	2	4	4	4	4	35	87,5
99	R99	4	4	4	4	3	3	3	3	4	0	32	80
100	R100	3	3	3	3	3	3	4	2	3	1	28	70
101	R101	4	4	3	3	4	4	3	3	4	1	33	82,5
102	R102	3	4	4	3	4	3	3	3	3	1	31	77,5
103	R103	4	4	4	4	4	4	3	1	3	3	34	85
104	R104	3	4	3	2	3	3	3	3	3	0	27	67,5
105	R105	0	2	1	2	2	2	3	3	1	1	17	42,5
106	R106	3	3	4	2	3	3	3	3	4	1	29	72,5
107	R107	3	3	3	2	3	3	3	3	3	0	26	65
TOTAL FINAL SCORE													7800
AVERAGE SCORE FINAL RESULT													72,89719626
MINIMUM													27,5
MAXIMUM													100

*name of corresponding author

After getting the final results from the questionnaire that has been filled in by the respondent. Then for the next questionnaire, it will be calculated using the SUS formula which gets a final score of 7,800, then here there is also the lowest score of 27 and the highest score of 100. Then the scores of all respondents are added up so that they get an average score:

$$\frac{7.800}{107} = 72,9$$

With a final score of 72.9, it can be concluded that the Marriage Administration Information System is in the category of grades between 68 - 80.3 including grade B or a "Good" rating. This clarification shows that the respondents have assessed that the marriage administration system is feasible and acceptable.

CONCLUSION

In general, the results of the evaluation of the usefulness of the marriage administration information system at the Religious Affairs office in the Lubuk Barumun sub-district have a positive value because they are included in grade B or a "Good" rating. This states that the marriage administration information system at the Office of Religious Affairs in the Lubuk Barumun District can be used in completing the tasks of the respondents. This system can also help respondents to find out the latest developments from the Office of Religious Affairs in Lubuk Barumun District through articles sent by the Religious Affairs office Admin. However, even though it has received a score of 72.9 with a "Good" rating, it can still be improved even more so that later it can reach a score of 80.3 in order to get an "Excellent" rating.

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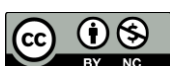
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