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Evaluation of the Attendance System Using the System Usability Scale Method at the Community Village Empowerment Office of Magetan Regency

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Abstract*. Advances in information technology have encouraged government agencies to implement electronic-based systems to improve the effectiveness, efficiency, and transparency of services. The Community and Village Empowerment Service of Magetan Regency uses the Presence and Performance Application System Si Apik application to record the attendance of State Civil Apparatus as part of the E-Government program. This study aims to evaluate the usability of the Si Apik application using the System Usability Scale method to measure the level of user satisfaction. The research approach involves descriptive qualitative and quantitative methods, with data collection through observation, SUS questionnaires, and semi-structured interviews. The results showed an average SUS score of 52.59, which is in the marginal category, with a grade D and an "OK" rating. This score indicates that the system still has technical constraints, such as network connections and application errors, which affect ease of use. Recommendations for improvement include optimizing features, increasing system stability, and providing clearer technical guidance. This study provides strategic input for the Community and Village Empowerment Service of Magetan Regency in improving the quality of Si Apik application services.*

Keywords: *Attendance, Evaluation, Si Apik, SUS*

1. INTRODUCTION

The Community and Village Empowerment Service (DPMD) of Magetan Regency is a Government Agency that has the task of assisting the regent to carry out government affairs that are the authority of the region in the field of community and village empowerment related to the empowerment of rural economic businesses and empowerment of community institutions as well as assistance tasks given to the district. In carrying out these tasks, the PMD Service of Magetan Regency uses a presence information system not only to increase the efficiency and effectiveness of the agency, but also as part of the implementation of the E-Government program created by the Indonesian government(Arai, Soichi. Toshiko, 2021). The implementation of the Electronic-Based Government System (SPBE) or E-Government in Indonesia is regulated in Presidential Regulation (PerPres) Number 95 of 2018 concerning the Electronic-Based Government System (SPBE). With this regulation, government agencies have begun implementing SPBE in each region, including Magetan Regency, which aims to build a clean, efficient, transparent, and accountable government system, as well as providing quality, reliable, and trustworthy public services, while increasing integration and efficiency(Choirunnisa et al., 2023).

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With Si Apik, it is hoped that the management of ASN attendance in Magetan Regency will be more structured and transparent, supporting the improvement of civil servant performance in Magetan Regency. Si Apik is integrated with employee data at the Communication and Informatics Office, so that only registered employees can enter and fill in their daily activity reports. However, in its use, Si Apik still has obstacles experienced by ASN employees such as poor network connections so that it takes a long time to upload photos, sometimes the Si Apik application experiences errors or cannot be accessed, and there are activities outside the office that prevent ASN employees from doing attendance. Thus, an admin presence is needed to make improvements to the attendance of employees who experience obstacles through the Si Apik website.

With these problems, it is necessary to conduct a usability evaluation of the Si Apik application. Information system evaluation is a process to find out the extent to which an information system implementation activity is carried out, both from the perspective of perception, users, organizations, and from the perspective of the information system technology system(Cahyani et al., 2020). Evaluation conducted on the Si Apik attendance system can be a useful process to measure the output evidence produced by the system, which will then provide recommendations so that information errors can be minimized. With this evaluation, it will provide benefits in the form of the availability of useful information for related parties, to create and determine policies that will be decided by forming from the evaluation process that has been implemented(Chotimah et al., 2023). A website needs to meet certain quality standards in order to satisfy its users. One indicator of this quality can be seen from the usability aspect of the website(Kesuma, 2020). By evaluating the usability aspect of the Si Apik application, the level of quality of the website system and user satisfaction can be determined(Dasmen et al., 2021). One of the methods used to evaluate the usability of the Si Apik application is the System Usability Scale (SUS) method. The System Usability Scale (SUS) is a user testing method that provides a “quick and dirty” measuring tool, but is still reliable(Kosim et al., 2022).

Thus, to find out the extent of the level of success and ease of use of the Si Apik application at the PMD Service of Magetan Regency, the author created the title "Evaluation of the Attendance Information System (Si Apik) Using the SUS Method at the Community and Village Empowerment Service of Magetan Regency"

2. LITERATURE REVIEW

A. Information System Evaluation

Information system evaluation is a real effort to find out the actual condition of an information system implementation. With evaluation, the achievement of an information system implementation activity can be known and further actions can be planned to improve the performance of its implementation(Andi Dermawan Putra et al., 2020; Pamungkas & Saifullah, 2019). Information System is a system within an organization that connects the needs of daily transaction management that supports the organization's operational functions that are leading with the strategic activities of an organization to be able to provide certain external parties with the necessary reports. Information system evaluation can be done in different ways and at different levels, depending on the purpose of the evaluation(Fila Delfia et al., 2022) (Saputera et al., 2020).

B. Attendance Information System

Presence is the activity of recording a person's presence at an agency, organization or company(Alkhalifi et al., 2023). Employees who arrive on time and are not late when starting work show discipline(Syahidi & Arif, 2023). The nature of employee discipline is a benchmark to see how employee performance is through their presence. Therefore, a company or institution must have an attendance information system to facilitate the management of employee attendance data. The Attendance Information System is a system designed to manage and record a person's attendance at an agency, organization, or company to facilitate the process of collecting attendance data(Dwi Iskandar, Norma Puspitasari, 2022). For example, in a government agency, the attendance system functions as proof of employee attendance in the office. Proof of attendance is also used to determine employee salaries by the finance department(Ulumudin et al., 2023).

C. Usability

*Usability*is one aspect in the field of Human-Computer Interaction that studies interface design and how humans interact with computers(Andriyani & Sari, 2023). Usability indicators are used to assess the level of user satisfaction in using certain technologies, applications, or products to achieve their goals. Success can be measured by the extent to which the application or technology is able to provide quality services to users(Kosim et al., 2022). There are five main criteria used to assess the level of usability of a system, as follows(Andriyani & Sari, 2023):

1. *Learnability*, describes the extent to which users can easily learn how to use the application.
2. *Efficiency*, related to the speed of users in completing various tasks in the application.
3. *Memorability*, refers to the user's ability to remember the layout of an interface after not using it for a certain period of time.
4. *Errors*, assessing the level of errors that occur when using an application or website.
5. *Satisfaction*, measuring the level of satisfaction felt by users.

3. METHODS

System Usability Scale (SUS) is a measuring tool used for testing users when using applications or systems that are "quick and dirty" in nature(Asnawi et al., 2023; Kosim et al., 2022; Rachmawati & Setyadi, 2023). The SUS method was introduced by John Brooke in 1986(Miftah & Sari, 2020). The SUS method has 10 questions with answers in the form of a Likert scale with 5 answer scores(Kesuma, 2020). Questions and answer scores can be seen in Table 2.1 and Table 2.2 below:

Table 1. SUS Method Question List

No	Question
1.	I think I will use this system again
2.	I find this system complicated to use
3.	I found this system easy to use.
4.	I need help from another person or technician in using this system.
5.	I feel like the features of this system work as they should.
6.	I feel like there are a lot of things that are inconsistent (not harmonious in this system)
7.	I feel like other people will understand how to use this system quickly.
8.	I find this system confusing
9.	I feel there is no barrier in using this system
10.	I need to get used to it first before using this system

Table 2. List of Questionnaire Scores Using Likert Scale

Answer	Score
Strongly Disagree (STS)	1
Disagree (TS)	2
Neutral (N)	3
Agree (S)	4
Strongly Agree (SS)	5

From Table 2.2 it can be explained that each positive question is a question with an odd number. Each score from a positive question will be reduced by 1 (Respondent's

answer score - 1). While negative questions are questions with even numbers. Each score from a negative question will be calculated by 5 minus the negative question score (5 - Respondent's answer score)(Amanda Zulfi Kurnia Tsani, 2024). In this study, modifying the Likert scale into 4 answer scores by eliminating the neutral point. Because the condition of respondents in Indonesia tends to choose the neutral option so that the questionnaire results are difficult to draw conclusions(Sanjaya et al., 2021). By modifying the Likert scale into 4 answer scores, respondents will provide firm answers to produce clear and more accurate data.

Next, each score value answered by the respondent is added up, then the resulting score value is multiplied by 2.5 as in the following formula.(Miftah & Sari, 2020).

$$Skor\ SUS = \big((R1 - 1) + (5 - R2) + (R3 - 1) + (5 - R4) + (R5 - 1) + (5 - R6) + (R7 - 1) + (5 - R8) + (R9 - 1) + (5 - R10)\big)\ x\ 2.5)$$

The final result of the calculation will have a value ranging from 0 to 100. Furthermore, the result of the overall SUS score is obtained from the total number of respondents' SUS scores divided by the number of respondents(Amanda Zulfi Kurnia Tsani, 2024). The calculation is used to produce an average score from the calculation of all scores from the respondents' answers. It can be seen in the following formula.

$$Skor\ Rata - rata = \frac{\sum \quad x}{n}$$

Information :

$\sum \quad x$ = sum of SUS scores

n = number of respondents

Next is to look at the scores with a rating scale ranging from grade A to E(Dermawan Mulyodiputro et al., 2023). The scale score values can be seen in Table 2.4 and Table 2.5.

Table 3. SUS Score Percentage

Grade	Information
A	Score >= 80.3
B	Score >= 74 and <80.3
C	Score>=68 and 74
D	Score >= 51 and <68
E	Score <51

Table 4. Acceptance range

SUS Score	Meaning of Score
0-50.9	*Not Acceptable*
51-70.9	*Marginal*
71-100	*Acceptable*

From the table above, it can be explained that the SUS scale with a value of <50 is included in the category of "not acceptable" or not accepted. If it is between 50-70, it is included in the category of "marginal". And if the scale has a value of >70, it is included in the category of "acceptable" or can be accepted(Dermawan Mulyodiputro et al., 2023).

4. RESULTS

The questionnaire was distributed to all employees at the Community and Village Empowerment Service of Magetan Regency, totaling 28 respondents. From the summary results, 28 respondents had filled out the questionnaire using a Google form containing 10 closed statements and 5 open statements. All respondents filled out the questionnaire with the answers given having a score with the scale used.

1. The Slick Application Information System

   The appearance of the Si Apik application is as follows:

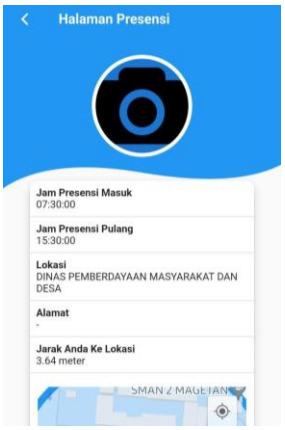

Figure 1. The Beautiful Presence Page

Figure 2. The Apik Presence History Page

2. Recapitulation of questionnaire data

The results of the questionnaire data are then processed into a table, to make it simpler, more concise and easier to understand. The results of the questionnaire data recapitulation can be seen in Table 5.1 below.

Table 1. Questionnaire Score Recapitulation Results

Response there	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Amount
R1	4	4	3	2	4	2	4	2	2	4	31
R2	4	2	4	1	4	2	3	2	3	2	27
R3	4	3	3	2	3	2	3	2	3	3	28
R4	4	3	4	2	4	1	3	1	3	1	26
R5	3	1	2	1	3	3	4	1	2	2	22
R6	3	1	3	1	3	2	3	2	3	3	24
R7	4	3	3	2	3	3	3	1	3	4	29
R8	4	1	3	2	3	1	3	1	3	2	23
R9	3	2	3	2	3	1	3	1	3	2	23
R23	4	2	3	2	3	3	3	2	2	2	26
R24	4	2	3	2	4	3	3	2	4	3	30
R25	3	2	2	1	4	3	3	1	3	3	25
R26	4	2	2	2	3	3	3	2	3	3	27
R27	3	3	3	1	3	3	4	2	3	3	28
R28	4	2	3	1	3	2	3	2	2	3	25

5. DISCUSSION

The score calculation uses the SUS method. The results of the respondents' answers are then calculated using the SUS formula, so that the SUS score is obtained as in table 5.2 below.

Table 2. SUS Score Calculation Results

Respondents	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	Amount	SUS Score (Total Score x 2.5)
R1	3	0	2	2	3	2	3	2	3	0	20	50
R2	3	2	3	3	3	2	2	2	2	2	24	60
R3	3	1	2	2	2	2	2	2	2	1	19	47.5
R4	3	1	3	2	3	3	2	3	2	3	25	62.5
R5	2	3	1	3	2	1	3	3	1	2	21	52.5
R6	2	3	2	3	2	2	2	2	2	1	21	52.5
R7	3	2	2	2	2	1	2	3	2	3	22	55
R8	3	3	2	2	2	3	2	3	2	2	24	60
R9	2	2	2	2	2	3	2	3	2	2	22	55
R23	3	2	2	2	2	1	2	2	1	2	19	47.5
R24	3	2	2	2	3	1	2	2	3	1	21	52.5
R25	2	2	1	3	3	1	2	3	2	1	20	50
R26	3	2	1	2	2	1	2	2	2	1	18	45
R27	2	1	2	3	2	1	3	2	2	1	19	47.5
R28	3	2	2	3	2	2	2	2	1	1	20	50
											Total SUS Score	1472.5
											SUS Average Score	52,5893

The calculation results from 28 respondents in table 5.2 obtained a total SUS score of 1472.5 with an average SUS score of 52,589.

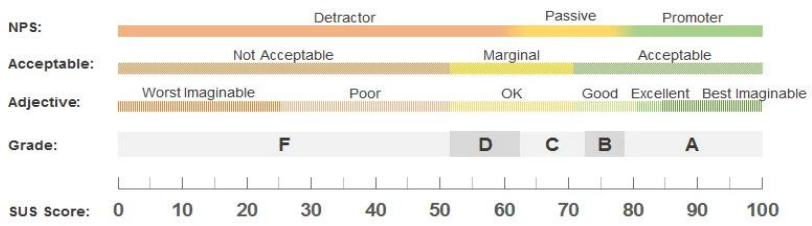

Figure 5.1SUS Score
Source :(Kesuma, 2020)

Figure 5.17 is the range of SUS score assessment. Thus, the results of the assessment of the Si Apik Application at the Community and Village Empowerment Service of Magetan Regency are:

1. The Acceptability Ranges or user acceptance level is in the marginal category.
2. The Grade Scale level is grade D.
3. The Adjective Rating level is in the “OK” category.

6. CONCLUSION

From the research results, the following conclusions can be drawn to create a suitable questionnaire to measure satisfaction and ease of use of the Si Apik System application, it must be adjusted to the needs of respondents from the Community and Village Empowerment Service of Magetan Regency. By using a standard SUS format, initial testing, and simple language, the questionnaire can provide accurate and relevant results to evaluate the Si Apik Application. The System Usability Scale (SUS) method is used as a tool to help evaluate the assessment of the system so that the assessment can be measured and structured accurately. So the results of the evaluation using the System Usability Scale method of the Si Apik Application at the Community and Village Empowerment Service of Magetan Regency are 52,589 which means that the system is stated in the marginal category with a low position including in the D scale grade with an "ok" rating, so it is concluded that the application system has not been used fully easily by users to obtain information services related to attendance.

7. LIMITATION

The limitations in this study regarding the evaluation of user satisfaction with the Si Apik attendance system are as follows: first, the evaluation focuses solely on the ease of use of the system when accessed or used; second, the method employed is the System Usability Scale (SUS), which, while effective, is limited in providing in-depth insights into the overall user experience; and third, the research object is confined to the Si Apik application implemented at the Community and Village Empowerment Service of Magetan Regency, meaning the results may not be generalized to other contexts.

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