Journal of Social Research

P-ISSN: 2827-9832
E-ISSN: 2828-335x
http://ijsr.internationaljournallabs.com/index.php/ijsr

Analysis of Human-Computer Interaction Satisfaction on The Employee Information System at The Department of Education, Bogor Regency (SAKEDIK) Using The Eucs Method

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ABSTRACT

The rapid advancement of information technology has encouraged government institutions to adopt electronic-based systems to enhance public service delivery. The Department of Education of Bogor Regency has developed the Personnel Information System (*SAKEDIK*) to streamline personnel data management. This study aims to evaluate user satisfaction with the *SAKEDIK* system using the End User Computing Satisfaction (*EUCS*) method, which assesses five dimensions: content, accuracy, format, ease of use, and timeliness. Data were gathered through questionnaires distributed to 97 respondents and analyzed using the Customer Satisfaction Index (*CSI*). The results show that overall user satisfaction falls within the "moderately satisfied" category. The information quality dimension received a "very satisfied" rating, while the system quality dimension was rated as "satisfied." These findings suggest that while the *SAKEDIK* system performs well in terms of content and accuracy, there is room for improvement in other areas, particularly in system usability and timeliness. This study provides insights that can guide future enhancements of the *SAKEDIK* system to improve user satisfaction and contribute to better public service management.

Keywords: *Personnel Information System, SAKEDIK, User Satisfaction, EUCS, Customer Satisfaction Index*

INTRODUCTION

The rapid development of information technology has now caused a new revolution, namely the transition from a conventional work system to the digital era (Bertot et al., 2010; George & George, 2020; Lathrop & Ruma, 2010; Shkabatur, 2012; Voronkova et al., 2023). In government, the implications of implementing electronic systems can create openness (transparency) as a service provider to the community (Lia Muliawaty S., 2020; Rommelse I.; van der Meer J.; de Bruijn Y.; Staal W.; Oerlemans A.; Buitelaar J., 2015; Stack R.; Prendeville P.; O'Halloran M., 2017). A theoretical study on the application of technology and good governance concludes that e-government encourages the creation of effective, efficient, transparent, and accountable good governance (Lia Muliawaty & Shofwan Hendryawan, 2020).

The Bogor Regency Education Office, as one of the current government agencies, has used the Bogor Regency Education Office Personnel Information System (SAKEDIK) to face these challenges (Li et al., 2017). This system is expected to assist all personnel data processing activities (Ellitan, 2020). To maintain the quality of an information system, evaluation is necessary, and the end-user satisfaction factor (EUCS) is one of the foundational aspects for system evaluation. Until now, there has never been an evaluation of the satisfaction level regarding the use of SAKEDIK. EUCS is a method created and developed by David Doll and Ali Torkzadeh in 1988. To determine the level of user satisfaction, SAKEDIK uses the

EUCS method, which is influenced by five variables: content, accuracy, format, timeliness, and ease of use (Muhammad Rikzam Kamal, et al., 2020).

This study highlights the relationship between the application of information technology through e-government and good governance, with a focus on transparency and accountability in public services (Kamal Y., 2022; Muhammad Rikzam Kamal Y.; Sihombing M., 2020; Wijaya, 2021). Although this study provides a strong overview of the benefits of e-government in improving governance, it lacks an in-depth look at the user satisfaction aspect of the implemented system. Thus, although e-government encourages transparency and efficiency, there is no detailed analysis of users' direct perceptions of the effectiveness and quality of the systems used (Cucus & Halim, 2019; Harrison et al., 2011; Hochstetter et al., 2021; Sebetci, 2018).

This study uses the EUCS method to measure user satisfaction in information systems by considering five dimensions: content, accuracy, format, timeliness, and ease of use. However, this study does not provide contextual details regarding the implementation of the system in more specific government sectors, such as the Bogor Regency Education Office. This research addresses that gap by providing a concrete application of the EUCS method to assess the satisfaction of SAKEDIK users in the context of public services at the local government level (Mekadmi & Louati, 2018; Sinurat & Putra, 2024).

This study fills a gap in the previous literature by providing a more in-depth focus on evaluating user satisfaction with information systems used in local government, especially in the Bogor Regency Education Office. By using the EUCS method, this study not only measures the effectiveness of the system based on technical variables, but also examines the user experience in using the system, which is an important factor in the successful implementation of *e-government*.

The purpose of this study is to analyze the level of user satisfaction with the Bogor Regency Education Office Personnel Information System (*SAKEDIK*) using the *EUCS* method. The benefit of this research is that it provides a basis for system evaluation to improve the quality of public services, as well as offering recommendations for further development to enhance user satisfaction and system efficiency in government.

METHOD

This study used a quantitative method. Primary data were obtained directly from the respondents as the object of research by distributing questionnaires. The data collection method used questionnaires.

The population in this study were personnel managers at the Bogor Regency Education Office, totaling 128 people. Sampling in this study used a purposive sampling technique. The researcher used the Slovin formula with a 95% confidence level and obtained a sample of 97 people consisting of two user groups: sub-district level personnel managers (for elementary level) and junior high school personnel managers.

To find out the category of respondents' answers from the questionnaire statements submitted in the categories of Very Satisfied, Satisfied, Dissatisfied, and Very Dissatisfied, the analysis was carried out using the Likert Method. The instrument testing technique used validity tests and reliability tests. Then, a descriptive statistical analysis was carried out on the results of the questionnaire that had been obtained. The results of the descriptive analysis were matched with the Criteria Satisfaction Index (*CSI*). This analysis was done by correlating each item's score with the total score. The total score was the sum of the entire item. The validity test was carried out on the statements in the questionnaire. Referring to the test results, all indicators of statements in the questionnaire were declared valid with a significance value of < 0.05 and an R-count value of > R-table. A questionnaire was said to be reliable if a person's answer to a statement was consistent or stable over time.

RESULTH AND DISCUSSION
Descriptive Statistical Analysis

The results of the Descriptive Statistical Analysis in Table 1 show that the number of samples in this is 97 respondents with details of the minimum, maximum, and mean values as follows:

Table 1. Statistical Analysis Results

	N	Minimum	Maximum	Mean	Std. Deviation
X1	97	1	4	3,2758	0,4809
X2	97	1	4	3,2509	0,4795
X3	97	1	4	3,2612	0,4848
X4	97	1	4	3,1804	0,5914
X5	97	1	4	3,2509	0,4795
Valid N (listwise)	97				

a. The content variable (X1) shows a mean value of 3.2758, a maximum value of 1, and a maximum value of 4.
b. The accuracy variable (X2) shows a mean value of 3.2509, a maximum value of 1, and a maximum value of 4.

The shape/format variable (X3) shows a mean value of 3.2612, a maximum value of 1, and a maximum value of 4.

a. The ease of use (X4) variable shows a mean value of 3.1804, a maximum value of 1, and a maximum value of 4.
b. The speed/timeliness variable (X5) shows a mean value of 3.2509, a maximum value of 1, and a maximum value of 4.

Test Results

a. **Validity Test**

The validity test was carried out by comparing the Rcal value with the Rtable for 97 respondents. The results of the instrument validity test can be seen in the table next:

Table 2. Variable Test Results

Variable	Indicator	Calculation	Table 5% (97)	Criteria
Content	C1	0.723	0.202	Valid
	C2	0.749	0.202	Valid
	C3	0.601	0.202	Valid
	C4	0.853	0.202	Valid
Accuracy	A1	0.766	0.202	Valid
	A2	0.789	0.202	Valid
	A3	0.768	0.202	Valid
Format	F1	0.808	0.202	Valid
	F2	0.677	0.202	Valid
	F3	0.699	0.202	Valid
Ease of Use	EOU1	0.745	0.202	Valid
	EOU2	0.740	0.202	Valid
	EOU3	0.692	0.202	Valid
	EOU4	0.809	0.202	Valid
Timeliness	T1	0.792	0.202	Valid
	T2	0.821	0.202	Valid

	T3	0.762	0.202	Valid

Table 2 shows the validity test results for all variables having a Calculated value greater than the Rtab. Based on these results, it can be concluded that all indicators on this questionnaire can be declared valid.

a. Validity Test

The results of the reliability test on the question on the variable have met the reliability criteria because the Alpha Cronbach value > 0.6 which is 0.956 according to the following table:

Table 3. Results of the Reliability Test on Questions

Alpha Cronbanch	N of Item
0,956	97

Based on the CSI score criteria as contained in Table 3, the average score of the EUCS is 64.6495, this value is in the category of Quite Satisfied (in the range of 51 - 65 of the ideal score of the CSI criteria.

b. Analysis of Questionnaire Calculation Based on EUCS Indicators

After receiving a response to the questionnaire, the percentage of satisfaction was calculated. The results of the questionnaire calculation will be matched with the score interpretation criteria based on the percent score interval. The percent score interval used to interpret the results of the questionnaire analysis is as follows.

Interval = 100 / Total Score
= 100 / 4
= 25

Based on the interval calculation, the interval value obtained is 25% per category. So that the criteria for interpreting scores based on intervals can be seen in Table 5 as follows.

Table 4. Interpretation Criteria for Scores by Interval

1	2	3	4
Very dissatisfied	Dissatisfied	Puas	Very satisfied
0-25%	26-50%	51-75%	76-100%

1. Variable X1 (Content)

Based on the results of the questionnaire, the statement indicator on the X1 variable (Content) has a criterion score of 1552 with the total score of the respondents being 1259. After the calculation, the percentage of 81.12% was obtained as shown in Table 5 below.

Table 5. Percentage Calculation of Variable X1 (Content)

Criteria score	Total Score	Percentage
1552	1259	81.12 %

Based on the results of this percentage, the result of the distribution of the percentage of respondents' answers based on the X1 variable (content*)* is 81.12% included in the **Very Satisfied category.**

2. Variable X2 (Accuracy)

Based on the results of the questionnaire, the statement indicator on the X2 variable (*Accuracy)* has a criterion score of 1164 with a total score of 937 from the respondents. After the calculation, the percentage of 80.50% was obtained as shown in Table 6 below.

Table 6. Percentage Calculation of Variable X2 (*Accuracy)*

Criteria score	Total Score	Percentage
1164	937	80.50 %

Based on the results of this percentage, the result of the distribution of the percentage of respondents' answers based on the X2 variable (accuracy*)* is 80.50% included in the **Very Satisfied category.**

2. Variable X3 (Format)

Based on the results of the questionnaire, the statement indicator on the X3 variable (*Format)* has a criterion score of 1164 with a total score of 940 from respondents. After the calculation, the percentage of 80.76% was obtained as shown in Table 8 below.

Table 7. Percentage Calculation of Variable X3 (Format*)*

Criteria score	Total Score	Percentage
1164	940	80.76 %

Based on the results of this percentage, the result of the distribution of the percentage of respondents' answers based on the X3 variable (format*)* is 80.76% included in the Very **Satisfied category.**

3. Variabel X4 (Ease of Use)

Based on the results of the questionnaire, the statement indicator on the X4 variable (ease of use) has a criterion score of 1552 with the total score of 1322. After the calculation, the percentage of 85.18% was obtained as shown in Table 8 below.

Table 8. Percentage Calculation for Variable X4 (Ease of Use)

Criteria score	Total Score	Percentage
1552	1322	85.18 %

Based on the results of this percentage, the distribution of the percentage of respondents' answers based on the X4 variable (ease of use) is 85.18%, included in the **Very Satisfied category.**

4. Variabel X5 (Timeliness)

Based on the results of the questionnaire, the statement indicator on the X5 variable (Timeliness) has a criterion score of 1164 with a total score of 937 from the respondents. After the calculation, the percentage of 80.50% was obtained as shown in Table 9 below.

Table 9. Percentage Calculation of Variable X5 (Timeliness)

Criteria score	Total Score	Percentage
1164	937	80.50 %

Based on the results of this percentage, the distribution of the percentage of respondent answers based on the X5 variable (timeliness) is 80.50% included in the **Very Satisfied category.**

CONCLUSION

Based on the results of this study, several conclusions can be drawn. First, there is a need for improvement in the accuracy and timeliness of the SAKEDIK system to further enhance its performance. Second, overall, the dimensions of content, accuracy, format, ease of use, and timeliness have high satisfaction rates, ranging from 76% to 100%. The users expressed a very high level of satisfaction with SAKEDIK in the following areas: content (81.12%), accuracy (80.50%), format (80.76%), ease of use (85.18%), and timeliness (80.50%). These findings indicate that SAKEDIK has been largely successful in meeting user expectations, particularly in terms of ease of use and content quality. For future research, it is recommended to conduct a longitudinal study to assess the long-term impact of continuous improvements to the system, especially in terms of accuracy and timeliness. Additionally, future studies could explore the influence of user training and support systems on satisfaction and system adoption.

Investigating the system's impact on organizational efficiency and employee performance could provide further insights into its effectiveness as a tool for public sector digitalization.

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