

ANALYSIS OF E-OFFICE SYSTEM USER SATISFACTION AT LAND OFFICE PEKANBARU CITY USING END USER COMPUTING SATISFACTION METHOD

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Abstract

An E-Office system is available at the National Land Agency, which is part of the Ministry of Agrarian Affairs and Spatial Planning and the National Land Agency. It is designed to make office administration easier. However, the use of E-Office is still not optimally used, such as the minutes feature that is underused, errors in sending letters that are sent not as desired, the dashboard display is less attractive and the guide menu cannot be accessed because of a link error. The purpose of this study is to evaluate user satisfaction with the E-Office system and identify its results. The End User Computing Satisfaction (EUCS) method with six variables (content, accuracy, format, ease of use, timeliness, user satisfaction) was used by researchers to assess user satisfaction with the E-Office system. 37 individuals from the E-Office system user population comprised the sample. The results of the proposed hypothesis test show that the hypothesis is accepted and has a significant effect of 78.9% on user satisfaction.

Keywords: E-Office, EUCS, Evaluation, System, User Satisfaction.

1. INTRODUCTION

The goal of satisfaction is to complete or improve something [1]. The more in line with expectations with reality, the level of satisfaction will also increase and vice versa [2]. To understand how far the expectations and perceptions of information system users have progressed, analysis of the level of satisfaction is crucial [3].

To meet the user's expectations, it is required to use an analysis of user satisfaction with the product [4]. The methodology used to gauge how satisfied users are with an information system is called End User Computing Statistics (EUCS), and it was developed by Doll and Torkzadeh in 1988 [5] [6].

An application called is a part of the National Land Agency (BPN) information system. Its goal is to streamline office administration procedures at the Ministry of Agrarian Affairs and Spatial Planning/National Land Agency [7]. BPN definitely needs the E-Office system since it can assist with office administration, including processing incoming and outgoing letters as well as dealing with letters that come from both within (internal Ministry of ATR/BPN) and from other agencies (external Ministry of ATR/BPN). The National Land Agency will start using the E-Office system in 2020 [8].

After conducting interviews with several BPN employees and admins, there were several problems that occurred in the E-Office system. In terms of the Content variable, the problem that occurs in the

National Land Agency (BPN) E-Office system is that the minutes feature in the E-Office system is not utilized. The content variable (content) is a variable used to gauge user satisfaction based on how well-rounded an information system's contents are in relation to user requirements.

In terms of the accuracy variable, the problem that occurs in the BPN E-Office is that there was an error when sending a letter through the E-Office system, this made the recipient of the letter complain against the employee because the letter sent did not match what was wanted. According to Doll and Torkzadeh in Saputra and Kurniadi (2019) [2] The information system provides accurate information, integrity, complete data and limited access rights for each user.

In terms of format variables, the problem that occurs in the BPN E-Office is that the dashboard design of the E-Office has an unattractive appearance and boring colors. Space on the dashboard is still underutilized. Based on the completeness of an information system's contents in relation to user wants, the content variable (content) is a variable used to gauge user satisfaction [1] [9].

In terms of the Easy of Use variable, the problem that occurs in the BPN E-Office is that the guide menu on the ASN section of the E-Office system has an error because the link entered in the E-Office system cannot be accessed.

In terms of Timeline variables, the problem that occurs in the BPN E-Office is that in the letter

information feature in the E-Office system there is still insufficient information such as date, letter number, agenda number, date of receipt and output. Every request made by the user will be quickly processed and shown in a timely manner, according to the timeline variable, which assesses the amount of user satisfaction in real time [10].

In this study, the End User Computing Satisfaction (EUCS) approach is used. By contrasting users' expectations and the actual performance of an information system, this technique is used to gauge how satisfied users are with an application system [11]. This results in a good criterion where users feel satisfied and helped [12][13]. According to Tarkzadeh and Doll in Saputri and Alvin (2020) [14] An information system's end user computing satisfaction (EUCS) is defined as an assessment made by all system users based on their usage history [15] [11]. The End User Computing Pleasure (EUCS) scale is based on five factors: content, accuracy, format, usability, timeliness, and user satisfaction [16]. These elements also function as independent elements [17] [18].

It is therefore necessary to conduct research to establish the level of user happiness in the Pekanbaru City Land Office E-Office system using the End User Computing Satisfaction (EUCS) approach in light of the justification that has been provided. This study can be utilized as a way to improve the E-quality Office's for user satisfaction and to offer recommendations for the Pekanbaru City Land Agency (BPN).

2. RESEARCH METHODS

The following Figure 1 is the research method that will be carried out.

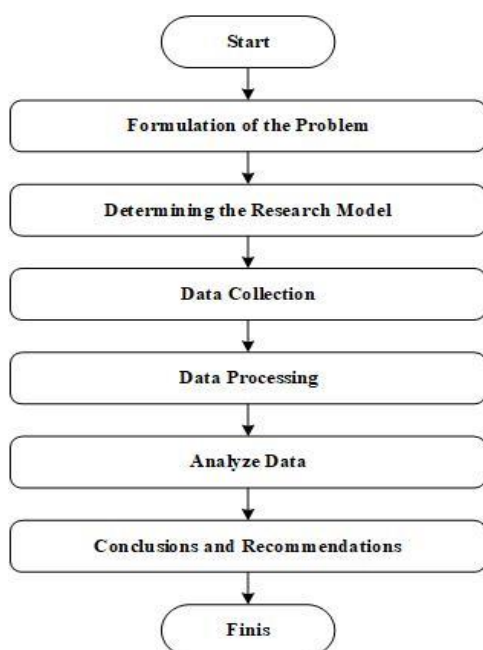


Image 1. Research Stage

2.1. Formulation of the Problem

How to analyze the system used at the BPN office in Pekanbaru City, namely the E-Office system, using the End User Computing Satisfaction (EUCS) method is the formulating the problem that will be studied in this study.

2.2. Determining the Research Model

Constructing the study model using the End User Computing Satisfaction (EUCS) technique's five variables (content, accuracy, format, easy of use, timeliness and user of satisfaction).

2.3. Data Collection

Conducting direct observations and interviews with the ATR/BPN Land Office in Pekanbaru City to obtain valid and complete data. Distributing questionnaires by giving some written questions to respondents. In this study, researchers distributed questionnaires to 37 respondents who were registered as users of the ATR/BPN Land office information system in Pekanbaru City.

2.4. Data Processing

The collected data is selected on the basis of validity and reliability. Data processing is carried out using statistical analysis with tools or tools in the form of applications, namely the SPSS 23 application. This program is designed to assess the reliability and accuracy of data. This application also searches the disseminated questionnaires for replies in order to calculate the percentage of each question item that was answered. The findings of this data processing will serve as the foundation for future research.

2.5. Analyze Data

The current activities being conducted are intended to gauge how satisfied E-office users are. Processing the data gleaned from the distribution of the questionnaire responses comes first after carrying out validity and reliability testing. The user adaption solution model method was used to create the Likert scale questions. Five factors, including content, correctness, format, usability, timeliness, and user pleasure, are taken into account in this methodology.

2.6. Conclusions and Recommendations

After examining the degree of user satisfaction with the e-office system, the researchers provided the ATR/BPN Land Office of Pekanbaru City with suggestions and ideas.

2.7. Research Variable

Based on the EUCS model consisting of six variables, indicators are made which can be seen in Table 1 below:

Table 1. Research Variable

Variable	Code	Indicator
Content (X1)	C1	Fill in the e-office information according to your needs
	C2	The contents of the e-office information are easy to understand
	C3	The contents and information in the e-office system are complete
	C4	The contents of the e-office information are very clear
Accuracy (X2)	A1	The e-office system has displayed correct and accurate data information.
	A2	E-Office provides satisfaction regarding accuracy
	A3	E-Office has a display that matches what is clicked
Format (X3)	F1	E-Office has an easy-to-understand interface
	F2	E-Office has an attractive appearance
	F3	E-Office has a matching color display
	F4	E-Office provides satisfaction regarding appearance
Ease Of Use (X4)	E1	E-Office is very easy to use
	E2	E-Office makes it easy to search letters
	E3	E-Office provides satisfaction regarding the convenience provided
Timeliness (X5)	T1	The letter search you need is quickly obtained through the e-office system
	T2	E-Office provides the right information
	T3	E-Office provides satisfaction in punctuality
Satisfaction (Y)	K1	E-Office can help and satisfy users in finding the letters they need
	K2	E-Office provides services quickly and precisely
	K3	E-Office is reliable when searching letters
	K4	The convenience of e-office can help employees in carrying out their work

2.8. Research Hypothesis

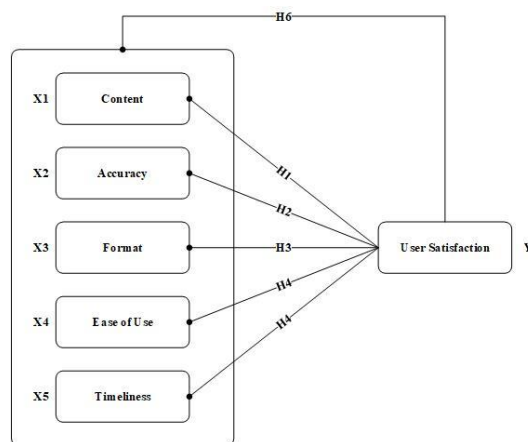


Image 2. Research Hypothesis

The research hypothesis is a presumption or short-term solution to the problem as it has been formulated. The designed hypothesis will be put to

the test in order to disprove it. The following are the study's hypotheses:

H1: The Content (X1) Has a Significantly Positive Effect on User Satisfaction (Y), H2: The Accuracy (X2) Has a Significantly Positive Effect on User Satisfaction (Y), H3: The Format (X3) Has a Significantly Positive Effect on User Satisfaction (Y), H4: The Ease of Use (X4) Has a Significantly Positive Effect on User Satisfaction (Y), and H5: The Timeline Variable (Y).

3. RESULTS AND DISCUSSION

3.1. Validity Test

In order to pass the test, r count must be more than r table when compared to the product moment correlation value, or r table. If the r count is higher than the r table, the questionnaire can be used in the analysis that follows. The result of this study, which had a total of 37 respondents, was r table = 0.334. Therefore, a correlation value for a person below 0.334 is deemed invalid. All personal correlation values were found to be greater than 0.334 in the validity test, so all questions were deemed valid.

Table 2 displays the outcomes of testing the processed data's validity for the user questionnaire.

Table 2. Validity Test

Statement	Correlation Value	R Table	Information
C1	0,669	0,334	Valid
C2	0,835	0,334	Valid
C3	0,761	0,334	Valid
C4	0,761	0,334	Valid
A1	0,849	0,334	Valid
A2	0,849	0,334	Valid
A3	0,834	0,334	Valid
F1	0,652	0,334	Valid
F2	0,921	0,334	Valid
F3	0,877	0,334	Valid
F4	0,903	0,334	Valid
E1	0,838	0,334	Valid
E2	0,846	0,334	Valid
E3	0,800	0,334	Valid
T1	0,901	0,334	Valid
T2	0,860	0,334	Valid
T3	0,938	0,334	Valid
K1	0,694	0,334	Valid
K2	0,609	0,334	Valid
K3	0,641	0,334	Valid
K4	0,684	0,334	Valid

3.2. Reliability Test

The reliability test demonstrates measurement stability. Stability refers to a questionnaire's capacity to measure concepts or constructs consistently from one situation to the next. The Cronbach alpha test was used to conduct the reliability test. The Cronbach alpha is regarded as dependable if it is higher than 0.60. All of the research questionnaire's statements were deemed reliable based on the Cronbach alpha value. Table 3 displays the outcomes of testing for the user satisfaction survey.

Table 3. Reliability Test

Variabel	Hasil Cronbach Alpha	Cronbach Alpha	Keterangan
Content (X1)	0,758	0,60	Reliabel
Acurracy (X2)	0,794	0,60	Reliabel
Format (X3)	0,849	0,60	Reliabel
Ease Of Use (X4)	0,767	0,60	Reliabel
Timeliness (X5)	0,868	0,60	Reliabel
Satisfaction (Y)	0,667	0,60	Reliabel

3.3. Research Description

The dependent variable in this study's descriptive results of the respondent data was user satisfaction, while the independent factors were content (X1), accuracy (X2), format (X3), usability (X4), and timeliness (X5) (Y). The general descriptive results of the data from the questionnaire that were gathered based on variables are shown in Table 4.

Table 4. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
Total C	37	12	15	13,46	,869
Total A	37	9	11	10,14	,631
Total F	37	9	11	9,92	,493
Total E	37	9	12	10,00	,782
Total T	37	9	11	9,81	,462
Total K	37	12	16	13,51	,837
Valid N (listwise)	37				

3.4. Normality Test

The non-parametric Kolmogorov-Smirnov (K-S) statistical test was used to determine the normality of the data in this investigation. The outcomes of the non-parametric Kolmogorov-Smirnov factual test are shown in Table 5 and are listed below.

Table 5. Normality Test

			Unstandardized Residual
N			37
Normal Parameters ^{ab}	Mean		,0000000
	Std. Deviation		1,13195937
	Absolute Differences		,118
Most Extreme Differences	Positive		,089
	Negative		-,118
Test Statistic			,118
Asymp. Sig. (2-tailed)			,200 ^{c,d}

The value of Asymp, as shown in the table above. Sig. (2-tailed) is greater than 0.05, indicating that the residual data have a normal distribution.

3.5. Multicollinearity Test

The multicollinearity test determines whether or not the regression model finds a correlation between the independent (independent) variables. There shouldn't be any correlation between the independent variables in a suitable regression model.

A multicollinearity test should be possible in two different ways, specifically by looking at resistance values and VIF (Change Expansion Variables). If the tolerance value exceeds 0.10, multicollinearity does not happen. In the absence of multicollinearity, the VIF value is less than 10.00.

Using the tolerance value in the coefficients table and the VIF (Varian Inflation Factor) method, the multicollinearity test was carried out in this study. The results of this study's multicollinearity test are listed below.

Table 6. Multicollinearity Test

Variabel Independent	Tolerance	Nilai VIF	Kesimpulan
Content (X1)	0,830	1,205	There is no multicollinearity
Accuracy (X2)	0,675	1,482	There is no multicollinearity
Format (X3)	0,875	1,142	There is no multicollinearity
Ease Of Use(X4)	0,819	1,221	There is no multicollinearity
Timeliness (X5)	0,618	1,619	There is no multicollinearity

Table 5's multicollinearity test results show that there is no multicollinearity because all variables have tolerance values over 0.1 and VIF values below 10.

3.6. Heteroscedasticity Test

This test aims to determine whether the relapse model has residuals and differences that move from one perception to the next. To do this, a scatter plot between the dependent variable's predicted value (ZPRED) and its residual value (SRESID) is used. Heteroscedasticity occurs when the dots form a particular regular pattern, such as a big wave, that first widens and then narrows. There is no heteroscedasticity if the points on the Y axis don't spread out above and below the number 0 in a certain pattern. Image 3 depicts the heteroscedasticity test's findings.

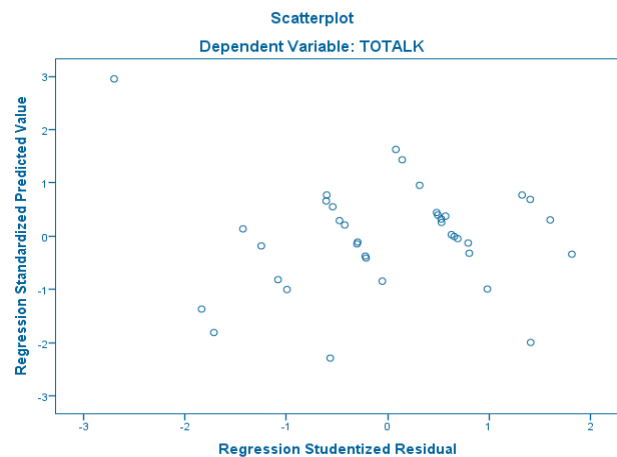


Image 3. Heteroscedasticity Test

The scatter plot graphic above shows that there is no heteroscedasticity because the dots do not form a specific pattern and spread above and below 0 on the Y axis. It is possible to draw the conclusion that the regression model used in this study lacked heteroscedasticity.

3.7. Multiple Linear Regression Analysis

This test will assess whether each dependent variable has a positive relationship to whether its value will rise or decrease depending on the value of the independent variable. The influence between the content variable (X1), the accuracy variable (X2), the format variable (X3), the ease of use variable (X4), the timeliness variable (X5), and the user satisfaction variable (X5) was examined using the multiple linear regression analysis model (Y). The outcomes of the multiple linear analysis are shown in Table 7: Multiple Linear Regression Analysis.

Table 7. Multiple Linear Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	18,459	4,247		4,346	,000
Total C	0,284	0,127	0,295	2,239	,032
Total A	0,443	0,174	0,334	2,544	,016
Total F	0,575	0,232	0,339	2,481	,019
Total T	0,448	0,144	0,418	3,100	,004
Total E	0,602	0,242	0,332	2,489	,018

3.8. T Test

To determine how each independent variable influences the dependent variable on its own, the T-test or partial hypothesis testing is performed.

Table 8. T Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Constant)	18,459	4,247		4,346	,000
Total C	0,284	0,127	0,295	2,239	,032
Total A	0,443	0,174	0,334	2,544	,016
Total F	0,575	0,232	0,339	2,481	,019
Total T	0,448	0,144	0,418	3,100	,004
Total E	0,602	0,242	0,332	2,489	,018

In this test, if the t count is higher than the t table, Ho is rejected and Ha is accepted as the outcome.

This demonstrates that the independent factors' effects on the dependent variable are not completely zero. If t counts from the t table, Ho is consequently accepted and Ha is rejected, indicating that the independent variable has a negligible impact on the dependent variable. Table 8 and Appendix D both contain examples of the T test.

The degree of freedom is determined by (df=n-k) when testing the regression model's null hypothesis. where k is the number of variables and n is the number of responders (independent and dependent). Therefore, df = 37 - 6 = 31, the number of variables is 6, there are 6 respondents in the t table, and a significant level of 5% (two-way test) equals 1.695.

3.9. F Test

The F test was used to evaluate the dependent variable and each independent variable separately. The test involved comparing the estimated F value to the F table with a 5% (a = 0.05) margin of error. The independent factors have a cumulatively positive impact on the dependent variable if the calculated F value is higher than the F table.

Table 9. F Test

Model	Sum of Squares	df	Mean Square	F	Sig.
1Regression	11,848	5	2,370	5,484	,001b
Residual	13,395	31	,432		
Total	25,243	36			

When the F table is searched at a significance level of 0.05, the outcome is F table = 2.520 with degrees of freedom df 1 = k-1 (6-1 = 5) and df2 = n-k-1 (37-5-1 = 31). Ha is accepted if the calculated F value is higher than the F table (5.484 > 2.520), and if the error rate is noticeably smaller (0.001 < 0.05). The result is that the factors accuracy, timeliness, usability, and content have a significant impact on user satisfaction.

3.10. Determination Coefficient Test

The model's ability to account for variation in the dependent variable is measured by the coefficient of determination (R²). We can evaluate the degree to which the independent variables can explain the dependent variable by testing the coefficient of determination. The range of R² values is 0 to 1, or 0 ≤ R² ≤ 1. The coefficient of determination is shown in Table 10. (R²).

Table 10. Determination Coefficient Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,685a	0,789	0,584	0,2573

3.11. Discussion

Table 11 provides a summary of the research findings.

Table 11. Summary of Findings

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1(Const ant)	18,459	4,247		4,346	,000
Total C	0,284	0,127	0,295	2,239	0,032
Total A	0,443	0,174	0,334	2,544	0,016
Total F	0,575	0,232	0,339	2,481	0,019
Total T	0,448	0,144	0,418	3,100	0,004
Total E	0,602	0,242	0,332	2,489	0,018

From the tests that have been completed because of the five factors Content, Exactness, Arrangement, Convenience and Practicality on the Client Fulfillment variable, it tends to be made sense of as follows:

(1) The Impact of Content on User Satisfaction According to the findings of this hypothesis test, the Content variable has a big impact on users' satisfaction with the E-Office system. Ho is rejected while Ha is accepted because the error rate in the significant column is less than 0.32 0.05 and the t count is higher than the t table ($2.239 > 1.695$). Since content has a significant impact on user satisfaction, it is concluded that the E-Office system will please users.

(2) How Accuracy Affects User Satisfaction It is evident from the results of this hypothesis test that user happiness is significantly impacted by the E-Office system's correctness. Ho is rejected and Ha is approved if the t count value exceeds the t table value ($2.544 > 1.695$), and Ha is accepted if the significant column error rate is less than 0.016 0.05. As a result, accuracy has a big impact on how satisfied users are with the E-Office system.

(3) How User Satisfaction Is Affected by Format The findings of this hypothesis test clearly show that user satisfaction is greatly influenced by the E-Office system's format variable. Ho is rejected and Ha is accepted because the t count is more than the t table ($2.481 > 1.695$) and the significant column error rate is less than zero (0.019 0.05). In light of this, it can be argued that format significantly affects users' satisfaction with the E-Office system.

(4) How Usability Affects User Satisfaction The findings of this hypothesis test demonstrate that the ease of use of the E-Office system has a substantial impact on user satisfaction. Ho is rejected while Ha is accepted because the significant column error rate is less than 0.019 0.05 and the t count value is more than the t table value ($3.100 > 1.695$). As a result, the ease of use of the E-Office system affects user satisfaction.

(5) How Timeliness Affects User Satisfaction It is evident from the results of this hypothesis test that the Timeliness variable significantly affects how

satisfied users are with the E-Office system. Ho is disregarded and Ha is acknowledged because the value of the t count is more than the value of the t table ($2.489 > 1.695$), whereas Ha is acknowledged because the value of the crucial segment is lower than the error rate (0.018 0.05). The implication is that the E-Office system's timeliness has a substantial impact on users' satisfaction.

4. CONCLUSION

Based on the results of the analysis and discussion in the previous chapters, it can be concluded that the results of data processing of each indicator (Content, Accuracy, Format, Ease of Use and Timeliness) in each variable contained in the EUCS method measure the level of satisfaction of E-Office system users by comparing the expectations and reality of an information system, where all variables in the EUCS method are included in the "GOOD" category with a user satisfaction level of 78.9%. It can be seen through Table 11. Summary of Findings.

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