ATCSJ
Applied Technology and Computing Science Journal
Open Access **p-ISSN 2621-4458 | e-ISSN 2621-4474**

Available online to journal2.unusa.ac.id
UNUSA
S4-Accredited – SK No.79/M/KPT/2023
Journal Page is available to https://journal2.unusa.ac.id/index.php/ATCSJ

Measurement of User Satisfaction for SIBISA Application at TK ABA 1 Buduran Sidoarjo with The EUCS method

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Article history:

Received 30 July 2024
Revised 10 August 2024
Accepted 18 August 2024
Available online 5 September 2024

Keywords:

Sistem Informasi Billing Siswa (SIBISA),
EUCS,
WhatsApp,
End User Computing Satisfaction.

Abstract

The SIBISA (Sistem Informasi Billing Siswa) application is utilized by parents at ABA1 Kindergarten in Buduran. Developed in 2022 by lecturers from the Informatics Engineering department, this application is designed to help schools manage financial records, particularly those related to tuition fees and other incidental expenses. The End User Computing Satisfaction (EUCS) method is one approach used to evaluate user satisfaction with information systems, including the SIBISA application. This method assesses various factors that influence user satisfaction, such as application performance, ease of use, and reliability.

Notably, the SIBISA application is integrated with WhatsApp, facilitating easier communication between parents and the school. After nearly a year of use, our group conducted a user satisfaction survey using the EUCS method to gauge the application's effectiveness. The results indicate that overall user satisfaction with the SIBISA application is at the "Quite Satisfied" level, meaning users generally find the application satisfactory. The analysis confirms that all five hypotheses—accuracy, content, ease of use, format, and timeliness—positively influence user satisfaction with the SIBISA application.

I. INTRODUCTION

Sistem Informasi Billing Siswa (SIBISA) application used by parents at ABA1 Kindergarten, Buduran. The SIBISA application was developed by lecturers majoring in Informatics Engineering consisting of Agus Prihanto, Dwi Fatrianto and Aditya Prapanca in 2022. This application is used by schools to record records related to school finances, especially in relation to tuition fees or other incidental finances. This application is already connected to WhatsApp, making it easier to interact between parents and the school.

The EUCS method is one of the methods used to measure user satisfaction with information systems. This method is used to measure user satisfaction with the application used. This EUCS method consists of several factors that affect user satisfaction, such as application performance, ease of use, reliability, and others. By using the EUCS method, application developers can find out the factors that need to be improved

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ISSN 2621-4474 (online) 2621-4458 (print) ©2023 The Authors. Published by UNUSA

DOI: https://doi.org/ 10.33086/atcsj.v6i2.5120.

in the developed application. Application developers can make improvements or improvements to these factors in order to increase user satisfaction.

Research on SIBISA application user satisfaction at TK ABA 1 Buduran, Sidoarjo needs to be conducted to measure the level of user satisfaction of the application. The EUCS method can be used as a tool to analyze factors that affect user satisfaction of the SIBISA application at TK ABA 1 Buduran, Sidoarjo. It is hoped that the results of this study can provide benefits for application developers in increasing user satisfaction.

This research has goal to evaluate how the EUCS method can be used to identify the level of satisfaction of SIBISA application users with the perspective of parents and make recommendations for improving application performance. Based on this background, we took a title related to our research, namely Measurement of user satisfaction of the SIBISA application at TK ABA 1, Buduran, Sidoarjo with the EUCS method.

II. RELATED WORKS

A. Student Billing Information Sistem

This SIBISA application consists of a web-based development contribution payment module that is integrated with the WhatsApp Messenger Chatbot Service that is connected to Student's Parent via Smartphone.

This application will generate billing bills that will be sent to the guardians every month along with payment codes and student data information using the WhatsApp bot. After the guardian transfers the development contribution payment and sends proof of payment, the financial officer will check according to the proof of transfer code sent by the guardian and respond to the payment confirmation via WhatsApp Messager to the guardian

B. User Satisfaction

User satisfaction can be defined as a level of feeling of a user as a result of a comparison between the user's expectations of a product with the real results obtained from the product [1].

User satisfaction is the result of a comparison between user expectations and their perception of the performance of the product or service received. The achievement of user satisfaction can be said to be successful if the user's response to the quality of library services is equal to or more than expected of the quality [2][3].

User satisfaction depends on the user's experience and perception of the product or service received. In addition, user satisfaction theory is also influenced by marketing concepts, such as user satisfaction and user loyalty[4].

C. EUCS method

This method End User Computing Satisfaction (EUCS) is a method that's used into measuring user satisfaction based on their/client respective experiences in using a system for several time. This method was developed by Doll and Torkzadeh [5], with five factors that can affect user satisfaction, which is, Content, Accuracy, Format, Ease Of Use, And Timeliness.

The EUCS method that will be used in this study to measure the level of satisfaction of SIBISA users in TK ABA 1 Buduran,

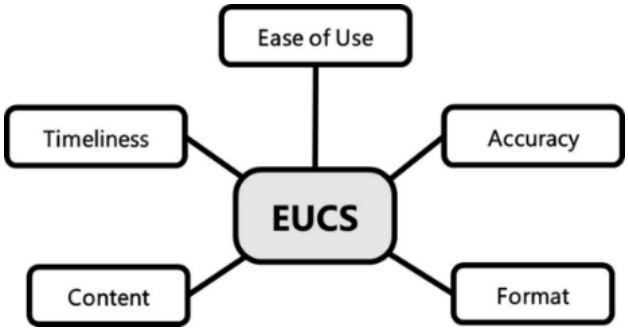

Figure 1. EUCS method
Source: Doll and Torkzadeh, 1988

Here is an explanation of each factor according to Doll and Torkzadeh (1988) [5]:

a. Content

Measuring client fulfillment in terms of the substance of a framework. The substance of the framework is ordinarily within the frame of capacities and modules that can be utilized by clients of the framework. In expansion, it too measures whether a framework produces data that matches client needs.

b. Accuracy

Measurement of user satisfaction based on data accuracy when the framework receives input and then processes it into information, we call kicks the bucket output. In this process we can see how the framework handles input.

c. Format

User measurement aims to make adjust whether the system with interface is looks attractive for user and whether the appearance of the system makes it comfortable for user to utilize the system on daily use, in that way in a roundabout way impact the level of client viability.

d. Ease of Use

Measuring client fulfillment in terms of client ease or client neighborliness in utilizing the framework such as the method of entering information, utilizing administrations, and finding the data required.

e. Timeliness

The level of customer satisfaction relates to the scope for displaying or providing information and data needed by customers. Inexpensive The system can be said to be a real-time system, meaning that every request or input from the customer is immediately prepared and the results are fast without a long wait.

D. Population

In conducting research, the main component that must be present is data. Data will be collected from various sources using accurate data collection techniques. Population is a group or association of objects that will later be concluded from the results of research [6]. Therefore, this pool has qualified criteria for use in solving research problems. In this study, the population is used to determine the total number of research objects or individuals to be studied.

In line with Sugiyono [7] view said, " The population can be a generalized zone composed of objects/subjects exhibiting certain qualities and characteristics, designated for consideration by sanctum analysts and conclusions drawn from them "

The population in this study is estimated to consist of 49 Guardians and 5 Teachers from kindergartens. ABA 1, Buduran, Sidoarjo.

E. Sample

Samples are part of the number and characteristics possessed by a population [6]. Samples are included in the part of a study population that is used to answer the results of a study.

In this study will use the selected Non-Probability Sampling Technique method or technique is a way of selecting things without resorting to randomness, and it's about looking at all of them and not just some of them. is a sampling technique if all members of the population are used as samples because the population is less than 100 [7].

F. Measurement Scale (Likert)

The measurement scale is an agreement to by determining the short length of time interval required by the measuring instrument it can be used in measurements to produce quantitative data [7]. The estimation scale is utilized to classify the factors to be measured so that blunders don't happen in information handling and in consequent examination steps.

This scale is utilized to total surveys that require respondents to show a degree of assent to a arrangement of questions.

Often, the questions utilized for investigate are called investigate factors and are decided particularly. In this ponder, the Likert scale is utilized to degree states of mind and suppositions, where this scale is connected more effectively and openly in deciding explanations concurring to the setting of the issues talked about in a think about.

Table 1. Measurement Scale

Answer	Value
Strongly Agree (SS)	5
Agree (S)	4
Neutral (N)	3
Disagree (T)	2
Strongly Disagree (ST)	1

Source: Rensis Likert, 1932

G. Validity and Reliability Testing

This test is intended to determine the validity and reliability of the instrument, so that it can be known whether it is suitable for use as collection. A validity test could be a test utilized to degree the validity or validity of a survey. A survey is said to be substantial on the off chance that the questions on the survey can specific or clarify something to be measured [8]. The calculation of the validity test is carried out using the formula of the product moment correlation technique from Karl Pearson [9] as follows:

$$r_{xy} = \frac{\mathrm{n}(\sum \mathrm{XY}) - (\sum \mathrm{X})(\sum \mathrm{Y})}{\sqrt{(\mathrm{n}\sum X^2) - (\sum X)^2)\,((\mathrm{n}\sum Y^2) - (\sum Y)^2)}} \quad (1)$$

Information:
rxy = Correlation coefficient of each item
X = Score of each factor
Y = All-factor score
N = Number of trial samples
2 = Score variable squared

If rxy > r table at a significant level of 5% means that the score (question item) is valid and vice versa if rxy < r table then the question item is invalid and does not meet the requirements.

Instrument reliability testing is carried out using the Alpha Cronbach formula, because this research instrument is in the form of questionnaires and stratified scales. Cronbach's Alpha formula is as follows:

$$r_i = \left(\frac{n}{n-1}\right)\left(1 - \frac{\sum {\sigma_b}^2}{{\sigma_t}^2}\right) \quad (2)$$

Information:
ri = sought-after reliability
n = number of question items
∑ σb2 = sum of score variances per item
σt2 = total variance

If the rhit > rtab then it can be said that the tested questionnaire table is reliable, on the other hand if the rhit < rtab then the tested questionnaire table is not reliable.

H. Multiple Linear Regression Analysis

Relapse investigation is utilized to degree the impact between the free variable and the subordinate variable. In the event that there's as it was one free variable and one subordinate variable, at that point the relapse is called basic direct regression. Conversely, on the off chance that there's more than one free variable or bound variable it is called different straight relapse. You can use multiple linear regression to find out how things affect other things. There is more than one thing that can have an impact. This way we can find out how important each thing is and how it makes a difference, and the relationship between the independent variable to the dependent variable [8]. The general form of the regression equation is as follows [7]:

$$Y = a + b1X1 + b2X2 + \cdots + bnXn + e \quad (3)$$

Information:
Y = Bound Variable
a = Constant
b 1.2..., n = Regression Coefficient
X 1.2..., n = Free Variable
e = Error

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 E-ISSN:*2621-4474, ISSN:2621-4458.*

III. METHODS

A. Research Design

The form in this study is quantitative data type research. Sometimes many tests allow us to be more specific about how we use certain words, and test established hypotheticals [7] The research was conducted to determine user satisfaction Measurement of SIBISA application user satisfaction at TK ABA 1, Buduran, Sidoarjo using the EUCS method. Broadly speaking, in this study several stages were carried out, which are as follows:

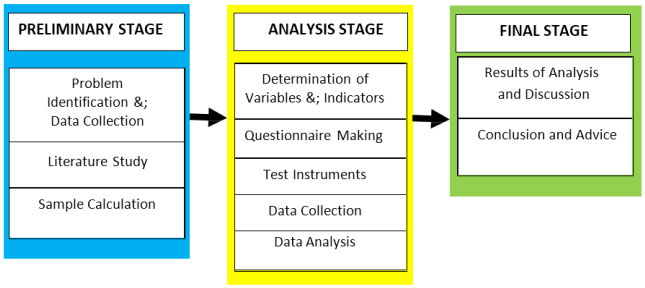

Figure 2. Research Methodology

B. Identify the Problem

At this stage, identify problems by finding the latest information about the use of the SIBISA application used by parents at ABA1 Kindergarten, Buduran. This application is used by schools to record records related to school finances, especially in relation to contribution payment or other incidental finances. This application is already connected to WhatsApp, making it easier to interact between parents and the school. The use of this application has been going on for almost 1 year, so to see how much user satisfaction the SIBISA application can be, inn this study, user satisfaction is measure with EUCS method.

C. Literature Study

Furthermore, a literature study was conducted related to the problems that had been found. At this stage study, seek information, and understand literature such as scientific journals, news, and previous research as a reference for this research. Several relevant literature and references are needed as support in research to be conducted. Based on the literature study that has been done, researchers decided to use the End User Computing Satisfaction (EUCS) method with 5 variables as a foundation in completing this study.

D. Observation

At this stage it aims to obtain information from an event by observation. Science which is the basis of all events or activities that occur both in a small scope and a larger scope, basically comes from learning or knowledge about events that occur around us or obtained indirectly by reading or listening to explanations from other parties.

Based on the identification of the problems carried out, researchers made observations about the use of SIBISA, especially from the side of parent users where researchers have access to see communication between the school and parents related to financial information submitted via WhatsApp by the school. The interaction shows that the intensity of using the Special application is quite intensive because parents also play an active role in interacting with the application, especially related to the bills they have to the school.

This application provides information to parent's what bills are still unpaid so that parents can easily find out how much arrears from payments they have not made. In addition, the school provides payment information that has not been paid via a web-based application which is continued via WhatsApp to be communicated with parents. This will be the focus of this research to find out how satisfied application users can be from the side of the parent user.

E. Variable Determination

Research In this study consists of independent variables (independent variables) and dependent variables (dependent variables).

1.Free Variable (Independent)

a) Content Describes a measure of end-user satisfaction by looking at content.
b) Accuracy Describes the measure of user satisfaction from the accuracy of the system in processing data to produce the right information.
c) Form (format) Describes a measure of end-user satisfaction by assessing the appearance and aesthetics of a system's interface.
d) Ease of use Describes the measure of end-user satisfaction in terms of ease of use of the system.
e) Timeliness Describes the measure of user satisfaction in terms of speed, up-to-date information, and the availability of options in speeding up when switching menus.

2. Dependent Variable The dependent variable used in this study is user satisfaction. Operational variables are attributes or properties or values of a person, object or activity that has certain variations that are determined by researchers to be studied and then drawn conclusions. The operational definition of such variables is as follows:

Table 2. Operational Definition of Variable Variables

Research Variables	Operational Definition	Code	Indicators
Content	Looking at the content in a system	C1	a. Fill in according to information needs
		C2	b. The contents are Ease to understand
		C3	c. The contents are complete
		C4	d. The content is very clear and always updated
Accuracy	The accuracy of the system in processing data and disseminating information	A1	a. Provide precise and accurate information
		A2	b. Display the corresponding output
		A3	c. Rarely get errors
Format	Shapes and looks presented in a system	F1	a. Intersting
		F2	b. Ease layout
		F3	c. The output has a clear display
Ease of Use		E1	a. Clear and Ease to understand
		E2	b. Ease to use

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	The ease felt by users when using the system	E3	c. Easily accessible anywhere and anytime
Timeliness	The user's perceived speed in either accessing the system or obtaining information	T1	1. Speed of obtaining information
		T2	2. Get timely information
		T3	3. Provide up-to-date information
User Satisfaction	Satisfaction felt by users based on the use of a system	US1	a. The quality of service provided is satisfactory
		US2	b. Compliance
		US2	c. Give recommendations to others
		US3	d. Desire to return in the use of the service

F. Population and Sample Determination

The Non-Probability Sampling technique chosen is the total sampling technique. Total sampling technique is a sampling technique if all members of the population are used as samples because the population is less than 100 [7][10]. In this study, the samples to be taken are all parents of ABA 1 Kindergarten, Buduran, Sidoarjo, namely 49 people.

G. Preparation of Questionnaires

The preparation of questionnaires was carried out to obtain data that could support this study. In making a questionnaire must compile questions that are well structured and related to the problem under study. The questionnaire is prepared in the form of choices given to respondents to be answered by choosing one of the answers according to the respondent's circumstances. The questionnaire that will be given contains independent and bound variables in this study.

H. Test Instruments

Before the questionnaire is distributed, first conduct instrument testing. Testing of these instruments is done through validity and reality testing. The test is carried out before the research is carried out to obtain valid and consistent question items. To obtain a distribution of measurement values that are close to normal, validity and reliability tests were carried out on at least 10 respondents [7].

By using questions that have been declared valid in the validity test and will be determined using the SPSS program. The variable is declared reliable with the following test decisions:

1. If Cronbach's Alpha value > 0.6 then reliable
2. If Cronbach's Alpha value < 0.6 then it is not reliable

A variable is said to be good if it has a Cronbach's Alpha value of > of 0.6 [11]. After the questionnaire is declared valid and realistic, then the questionnaire can be distributed to respondents who want to be addressed in accordance with the purpose of the study.

The measurement scale used in this study consists of 4 levels, namely Strongly Agree (SA), Agree (A), Disagree (DS), and Strongly Disagree (SD). The Likert scale modification is intended to eliminate weaknesses found on the five-level scale [7] This modification removes the middle or neutral answer category based on several reasons, namely, the category can have a double meaning or be interpreted as not being able to give a definite answer, the availability of answers in the middle causes a tendency to answer to the middle, and in order to see the tendency of respondents' opinions towards agreeing or disagreeing.

Table 3. Modification of the Measurement Scale

Answer	Value
Strongly Agree (SA)	4
Agree (A)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Source: Riduwan, 2006

I. Data Collection

In addition, information collection was conducted using essential and additional types of information. Essential information can be a source of information that provides information directly to information collectors, while auxiliary information is pre-existing information and is intentionally collected to comprehensively determine information needs. Essential insights were gained from sanctum results of the transmission of surveys.

J. Calculation Method

a) Variable Due Diligence

Variable feasibility tests using validity and reliability tests are used to the instruments used are valid and reliable as a condition for a good instrument [8].

b) Validity Test

Validity is a research tool that questions whether the tool can measure what is measured [12].

In addition, validity is testing with See the extent of accuracy and accuracy of measuring instruments in performing their functions [13]. Validity indicates how far away a test or a set of operations is. The operation measures what it is supposed to measure. Formula used to find values correlation The author uses the Pearson Product Moment formula with the formula as next:

$$rxy = \frac{n\Sigma x_i xtot - (\Sigma x_i)(\Sigma xtot)}{\sqrt{(n\Sigma x^2{}_i - (\Sigma x_i))(n\Sigma X^2 tot - (\Sigma xtot)^2)}} \quad (4)$$

Information:

r = Product moment Correlation Coefficient
n = Number of Samples
Σxi = Total score of an item
Σxtot = Total number of answers
Σxi2 = Number of squares of an item's answer score
Σx2tot = Total squared sum of answer scores
Σxixtot = number of multiplications of answer scores by total cores

a) Reliability Test

Reliability test is testing with reference to the level of reliability something. This test is to create an instrument that is already trustworthy, because reliable instruments will produce reliable data [9].

Reliability is a measurement that shows stability and Consistency of instrument which measures a concept [14] The formula used in the test. This reliability is:

$$r1 = \left(\frac{k}{k-1}\right)\left(1 - \frac{\Sigma \sigma b^2}{\sigma t^2}\right) \quad (5)$$

Information:

R1 = Instrument Reliability
k = Number of questions or number of questions
∑σ = Number of grain variances
σ = Total variance

K. Data Analysis

This research uses quantitative data analysis techniques where these techniques are used to process or manage numerical or statistical data. Next, do a recapitulation or recap of answers based on independent variables using a predetermined measurement scale. Then, user satisfaction measurement is carried out using the following steps [7]:

1. Determine the magnitude of the ideal score (∑SK) ∑SK = highest score x total frequency of answers
2. Number of scores of variable data collection results (Xn) (∑SH) ∑SH = (score value 1 x total frequency of answers 1) + ... (score value n x total frequency of answer n)
3. Find the percentage (P)

$$P = \text{ x } 100\%\frac{\sum SH}{\sum SK} \quad (6)$$

L. Results of Analysis and Discussion

Some things that are generally done in the results of analysis and discussion include:

1) Data description: Describes data obtained from research using tables, graphs, or figures.
2) Data processing: Perform statistical analysis of the data obtained, such as t-test, F test, or regression analysis, to determine whether there is a relationship between the variables studied.
3) Data interpretation: Explains the meaning or meaning of data that has been processed and interpreted. In this stage, researchers will associate research results with relevant theories and explain the implications of the research results.
4) Discussion: Explain in detail about the results of the study, relate the results of the study to the hypotheses that have been proposed, and discuss whether the results support or reject the hypothesis. At this stage, researchers can also discuss factors that affect research results and provide suggestions or recommendations for future research.

M. Conclusion and Advice

Conclusions and suggestions are the concluding part of the research studied. In the conclusion section will be briefly explained the results of the research that has been studied. In the advice section, suggestions will be outlined that researchers think are necessary for parties involved in research. In this study, conclusions will contain the results of measuring user satisfaction of the SIBISA application at TK ABA 1, Buduran, Sidoarjo using the EUCS method, along with research suggestions for the next and the parties involved

IV. RESULTS AND DISCUSSIONS

A. Validity Test

The Validation Test is performed by correlating the question score with the total score of the variable. To see the validity, look at the column with corrected element correlation. If the r value in this column > r array, then the element/variable is valid.

Table 4. r - Table

df = (N-2)	Tingkat signifikansi untuk uji satu arah				
	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
1	0.9877	0.9969	0.9995	0.9999	1.0000
2	0.9000	0.9500	0.9800	0.9900	0.9990
3	0.8054	0.8783	0.9343	0.9587	0.9911
4	0.7293	0.8114	0.8822	0.9172	0.9741
5	0.6694	0.7545	0.8329	0.8745	0.9509
6	0.6215	0.7067	0.7887	0.8343	0.9249
7	0.5822	0.6664	0.7498	0.7977	0.8983
8	0.5494	0.6319	0.7155	0.7646	0.8721
9	0.5214	0.6021	0.6851	0.7348	0.8470
10	0.4973	0.5760	0.6581	0.7079	0.8233
11	0.4762	0.5529	0.6339	0.6835	0.8010
12	0.4575	0.5324	0.6120	0.6614	0.7800
13	0.4409	0.5140	0.5923	0.6411	0.7604
14	0.4259	0.4973	0.5742	0.6226	0.7419
15	0.4124	0.4821	0.5577	0.6055	0.7247
16	0.4000	0.4683	0.5425	0.5897	0.7084
17	0.3887	0.4555	0.5285	0.5751	0.6932
18	0.3783	0.4438	0.5155	0.5614	0.6788
19	0.3687	0.4329	0.5034	0.5487	0.6652
20	0.3598	0.4227	0.4921	0.5368	0.6524
21	0.3515	0.4132	0.4815	0.5256	0.6402
22	0.3438	0.4044	0.4716	0.5151	0.6287

From the results of the analysis, a correlation value was obtained between the item score and the total score. We then compare this value with the table r value, the table r is found at a significance of 0.05 with a 2-sided test (Two Tail) and the amount of data (n) = 20, then we get a table r of 0.4438 (see table appendix 5). With the calculation df = n - 2, df = 20-2 = 18.

Table 5. Pearson Correlation (Two Tailed)

Statement	Pearson Correlation	R Table	Status
C1	0,731	0,4438	**Valid**
C2	0,801	0,4438	**Valid**
C3	0,772	0,4438	**Valid**
C4	0,772	0,4438	**Valid**
A1	0,864	0,4438	**Valid**
A2	0,835	0,4438	**Valid**
A3	0,448	0,4438	**Valid**
F1	0,771	0,4438	**Valid**
F2	0,883	0,4438	**Valid**
F3	0,808	0,4438	**Valid**
E1	0,886	0,4438	**Valid**
E2	0,874	0,4438	**Valid**
E3	0,825	0,4438	**Valid**
T1	0,872	0,4438	**Valid**
T2	0,879	0,4438	**Valid**
T3	0,848	0,4438	**Valid**
US1	0,732	0,4438	**Valid**
US2	0,739	0,4438	**Valid**
US3	0,807	0,4438	**Valid**
US4	0,804	0,4438	**Valid**

From these results can be seen in the table r for df = 20 and α = 5%, so the value of r table is 0.4438. The statement for the validity test is valid if the calculated value > r-table. So, the results of data processing can be concluded 20 perception statement questions are declared valid because all values of r count (Pearson Correlation) of perception statement items are greater than r table.

E-ISSN:*2621-4474, ISSN:2621-4458.*

B. Reliability Test

A variable is said to be good if its Cronbach Alpha value > 0.6 [11]. After the questionnaire is determined to be valid and reliable, it can be distributed to respondents who want to answer according to the research objectives. The scale used in this study consists of 4 levels, namely "Strongly Agree" (SA), "Agree" (S), "Disagree" (D) and "Strongly Disagree" (SD). Likert scale modification aims to eliminate weaknesses identified on a five-point scale [7] This change removes categories of moderate or neutral answers for several reasons: categories can be double-meaning or mean unable to give a definite answer, the availability of moderate answers leads to a tendency toward average answers and looking at the tendency of respondents' opinions to agree or disagree.

Table 6. Reliability Test Results

Case Processing Summary

Cases	N	Percent
Valid	40	100,0%
Excluded	0	,0%
Total	40	100,0%

Reliability Statistics

Cronbach's Alpha	N of Items
,97	20

In other theories it is interpreted as follows:

a. If the alpha > 0.90 then reliability is perfect. If the alpha is between 0.70 – 0.90 then reliability is high.

b. If alpha 0.50 – 0.70 then reliability is moderate. If alpha < 0.50 then reliability is low.

The results of the reality test on the research instrument showed a result of 0.97 which means the Cronbach Alpha value > 0.6 which can be interpreted the conclusion of the research instrument has high reliability so that it can be used to take data to respondents.

C. User Satisfaction Level Measurement Analysis

The following are the results of research and discussion of satisfaction level measurement analysis user.

a) Results of User Satisfaction Level Measurement Analysis

In measuring and determining the level of satisfaction End users of the SIBISA Application service, researchers make satisfied and dissatisfied statements on questionnaires such as Table 7 based on Kaplan and Norton's theory.

Table 7. User Satisfaction Levels

Information	Score
Very dissatisfied	1 – 1,79
Not Satisfied	1,8 – 2,59
Quite Satisfied	2,6 – 3,39
Satisfied	3,4 – 4,1
Very satisfied	4,2 - 5

The score value is obtained from the average value (mean) from respondents' answers in accordance with the existing measurement scale using a positive measurement scale [15].

Table 8. User Satisfaction Levels

Variable	Mean	Scale	Predicate
Content	3.311	3	Quite Satisfied
Accuracy	3.138	3	Quite Satisfied
Format	3.114	3	Quite Satisfied
Ease of Use	3.155	3	Quite Satisfied
Timeliness	3.073	3	Quite Satisfied

The results of the satisfaction level of user in Table 8 states that the overall user satisfaction level is at level 3 Moderately Satisfied.

b) Discussion of User Satisfaction Level Measurement Analysis Results

Based on Table shows the results that the level of satisfaction users who use SIBISA services are at the level of Quite Satisfied which means the user is still already quite satisfied to performance in using SIBISA Application services. With this result, efforts are also needed from SIBISA application developers to improve again for services on SIBISA to increase user satisfaction.

V. CONCLUSIONS AND RECOMMENDATIONS

The conclusions and recommendations about the result of the measurement of user satisfaction of the SIBISA Application at TK ABA 1, Buduran Sidoarjo was carried out by distributing questionnaires to parents and stakeholders using the EUCS method as the basis for preparing the questionnaire device so that data related to user satisfaction could be obtained based on the test results, the level of user satisfaction using the SIBISA application service as a whole is at the level of Quite SATISFIED, which means that users are satisfied enough to use the SIBISA Application service.

VI. REFERENCES

[1] J. F. Hair, J. J. Risher, M. Sarstedt, and C. M. Ringle, "When to use and how to report the results of PLS-SEM," *European Business Review*, vol. 31, no. 1, pp. 2–24, Jan. 2019, doi: 10.1108/EBR-11-2018-0203.
[2] Rahayuningsih and Frances, *Measuring User Satisfaction*. Yogyakarta: Graha Ilmu, 2015.
[3] N. M. D. Widiastuti, S. H. Wijoyo, and A. H. Brata, "Analisis kinerja sistem informasi data korporasi jasa raharja (DASI-JR) dengan menggunakan metode PIECES," *Jurnal Pengembangan Teknologi Informasi dan Ilmu Komputer*, vol. 3, no. 8, pp. 7752–7758, 2019.
[4] Philip Kotler and Kevin Lane Keller, *Marketing Management*. Jakarta: Erlangga Publisher, 2009.
[5] W. J. Doll and G. Torkzadeh, "The Measurement of End-User Computing Satisfaction," *MIS Quarterly*, vol. 12, no. 2, p. 259, Jun. 1988, doi: 10.2307/248851.
[6] Agus and Micah Widiyanto, *Applied Statistics: Concepts and Applications in Research in Education, Psychology, and Other Social Sciences*. PT Elex Media Komputindo, 2013.
[7] P. D. Sugiyono, "Quantitative, qualitative, and R&D research methods," *Bandung:(ALFABETA, Ed.)*, 2018.
[8] I. Ghozali, "Application of multivariate analysis with IBM SPSS 25 Program," *Semarang: Diponegoro University Publishing Agency*, 2018.

[9] Arikunto, *Research Procedures: A Practice Approach (Revised Edition)*. Jakarta: Rineka Cipta, 2010.
[10] I. Ghozali, "Structural equation modeling, alternative method with partial least square (PLS)," *Semarang: Diponegoro University Publishing Agency*, 2014.
[11] D. Priyatno, "Correlation, Regression and Multivariate Analysis with SPSS," *Yogyakarta: Gava Media*, 2013.
[12] Nurgiyantoro and Burhan, *Assessment in Language Teaching Competency Based*. BPFE, 2013.
[13] Wiratmanto, *Factor Analysis and Its Application in Identifying Factors Affecting Consumer Satisfaction Against*. Yogyakarta, 2014.
[14] H. M. Jogiyanto, "Business research methodology," *Yogyakarta: BPFE*, 2004.
[15] A. Fitriansyah and I. Harris, "Pengukuran kepuasan pengguna situs web dengan metode End User Computing Satisfaction (EUCS)," *Query: Journal of Information Systems*, vol. 2, no. 1, 2018.