

APPLICATION OF THE SERVQUAL METHOD TO MEASURE STUDENT SATISFACTION

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Abstract

Background: Student satisfaction services for SMA Negeri 3 Tanjungbalai have not been analyzed yet. So that the impact is less than optimal satisfaction services for facilities at SMA Negeri 3 Tanjungbalai, inadequate training of teaching staff, administrative services. By looking at these conditions, it becomes the impetus for making a decision-making system regarding participant satisfaction services using an information systems technology approach. **Method:** This study uses the Servqual (Service Quality) method used to measure service quality from the attributes of each dimension, so that the GAP value (gap) will be obtained which is the difference between consumer perceptions of services that have been received and expectations of what will be received. **Result:** From the results of the percentages that have been carried out, the results of the assessment carried out by the 30 respondents stated that the level of service at SMA Negeri 3 Tanjungbalai in providing services to students was in the Satisfied category with a percentage result of 87.50%, therefore SMA Negeri 3 Tanjungbalai proven to have provided proper service to their students. **Conclusion:** The system that has been created has succeeded in providing results that are in accordance with the calculations carried out manually. So that the system is feasible to use to achieve its goal of making it easier for the principal in determining who is eligible to become a teacher with the best service which was previously manual.

Keywords: Measuring Student Satisfaction, Servqual Method

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INTRODUCTION

Entering the industrial revolution 4.0 which is entirely integrated with the internet, of course information technology has now become something that is difficult to be separated from the needs of some and even all of humanity in the world. Currently, the trend of computerization is experiencing rapid development, the overall cost of using equipment in the health sector that follows developments must be adjusted, improving efficiency and quality of service will always be used as an important aspect to increase competitiveness in the world of education.

Research on the Service Quality method has been widely carried out, namely "Analysis of Service User Satisfaction with Web-Based Service Quality Methods". The application built can be used to analyze service user satisfaction where the value of the gap between expectations and reality is felt by service users [1]. "Analysis System of Student Satisfaction Levels Against Teaching and Learning Activities at PSTI UNRAM Using the Service Quality Method". The result is a system that is designed as expected and facilitates the process of analyzing the level of student satisfaction [2]. "Health Service Information System at Belawan Health Center Using Web-Based Service Quality (Serqual) Method". This information system has been designed and implemented using PHP and MySQL as the database, which can be used to generate related surveys. The existence of this information system makes it easier for users to analyze existing problems [3].

SMA Negeri 3 Tanjungbalai is one of the public schools in Tanjungbalai City

with an upper secondary level, to prepare students who excel and are able to compete in the world of work. Student satisfaction services for SMA Negeri 3 Tanjungbalai have not been analyzed yet. So that the impact is less than optimal satisfaction services for facilities at SMA Negeri 3 Tanjungbalai, inadequate training of teaching staff, administrative services. By looking at these conditions, it becomes the impetus for making a decision-making system regarding participant satisfaction services using an information systems technology approach. Based on these problems, it is important to conduct research related to the assessment of service quality at SMA Negeri 3 Tanjungbalai to find out how the quality of services provided to especially trainers and become an evaluation for SMA Negeri 3 Tanjungbalai to improve services.

The author proposes to make a decision support system using the Servqual method (Service Quality) is a method used to measure service quality from the attributes of each dimension, so that the GAP (gap) value will be obtained which is the difference between consumer perceptions of the services that have been received and expectations. to what will be accepted. The measurement of this method is by measuring the quality of service from the attributes of each dimension, so that the gap value will be obtained which is the difference between consumer perceptions of the services received and consumer expectations of the services to be received. However, in general, there is no uniform definition of the concept of service quality (Servqual) [4].





RESEARCH METHODS

Service Quality (Servqual) method is a method for measuring service quality which consists of 5 (five) dimensions of service quality. Servqual is considered to meet the statistical validity requirements because of its high frequency of use. In this case, to measure the level of satisfaction, the Servqual method is used because among various service quality measurement models, Servqual is the most widely used method [5]. Here are the calculation steps using the Servqual method, namely [6]:

1. Calculating the results of customer expectations or expectations regarding services using the following calculations:

$$\sum yi = ((\sum STT \times 1) + (\sum TT \times 2) + (\sum CT \times 3) + (\sum T \times 4) + (\sum ST \times 5))(1)$$

Where $\sum yi$ is the number of weighted answers to the i -th expectation statement, $\sum STT$ is the number of people who choose the answer strongly disagree, $\sum TT$ is the number of people who choose the answer disagree, $\sum CT$ is the number of people who choose a neutral answer, $\sum T$ is the number of people who choose the answer agree, $\sum ST$ is the number of people who choose the answer strongly agree and 1,2,3,4 is the score for the linkert scale.

2. Calculating the average results of respondents' answers to the statement of expectations using the following equation:

$$Yi = \frac{\sum yi}{n} \quad (2)$$

Where Yi is the average respondent's answer to the I -th expectation statement, $\sum yi$ is the total weight of the answer to the $-I$ attribute expectation question and n is the number of respondents.

3. Calculating the results of reality or customer perceptions of services using the same equation as point 1 looking for the value of the results of expectations or expectations.

4. Calculate the average results of respondents' answers to statements using the same equation as point 2 to find the average results of the expectations.

5. Determine the quality results of a service attribute or the results of the Servqual gap by using the following equation:

$$SQi = Xi - Yi \quad (3)$$

Where SQi is the value of the i -th attribute gap, Xi is the average reality value of the i -th attribute, Yi is the mean value of the i -th expectation.

RESULTS AND DISCUSSION

After calculating the assessment carried out by the respondent, the calculation data can be recapitulated as follows:

No	Satisfaction Level	Var	(%)
1	Satisfied	14	87,50%
2	Sangat Puas	2	12,50%
3	Not satisfied	0	0,00%

Table 1. The level of service quality at SMA Negeri 3 Tanjungbalai

From the percentage results above, it can be concluded that the assessment carried out by the Thirty (30) respondents stated that the level of service at SMA Negeri 3 Tanjungbalai in providing services to students was in the Satisfied category with a percentage result of 87.50%, therefore the Bank in order to further improve services to students who are more leverage.





A. General System Design

To help the process of measuring student satisfaction at SMA Negeri 3 Tanjungbalai quickly, precisely and completely. The system to be built uses the PHP and MySQL programming languages in making the application and uses the Sublime Text editor so that it can simplify the design. Broadly speaking, the system process to be designed is described by the Use Case Diagram contained in Figure 1.

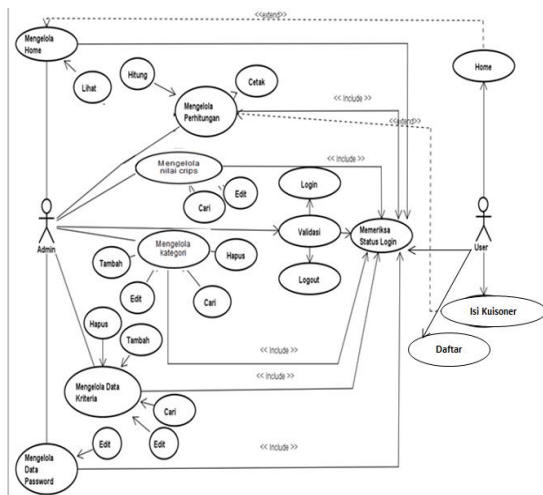


Figure 1. Use Case Diagram

There are several activities that occur when running this system, namely logging in for the admin, processing criteria and category data, Crips value and viewing results, printing the results of changing passwords and logging out.

The class diagram of the SPK Measuring Student Satisfaction at SMA Negeri 3 Tanjungbalai is shown in Figure 2.

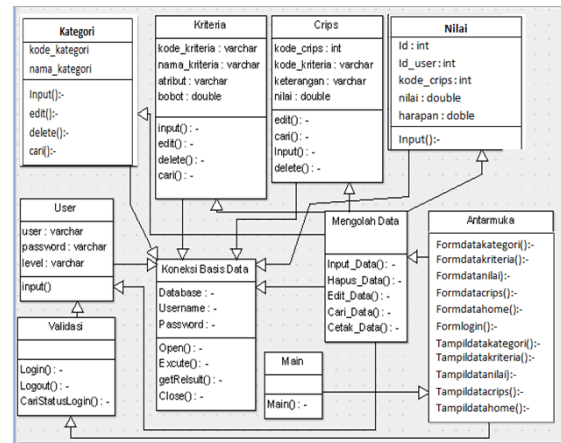


Figure 2. Class Diagram Measuring Student Satisfaction

There are five classes shown in Figure 2, namely admin class, criteria, category, and result value. The admin class has a one-to-many relationship to the criteria data class, meaning that one admin processes many criteria. Likewise, the admin class has a one-to-many relationship to the Category data class, meaning that one admin processes many Categories. And the criteria class has a many-to-one relationship, meaning that many criteria belong to one category. Meanwhile, the result value is a dependency relation to the Category class.

B. System Implementation

Program implementation is the stage of implementing the system that has been designed and approved for its design. In the implementation stage, it is also explained about the application of the application that was built. The implementation stages apply in detail, the results of the analysis and design.



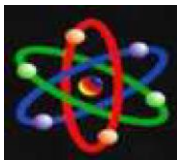


Figure 3. Main Menu Form

This main menu form contains menu and sub menus contained in the previously designed admin system, the user can choose the menus provided by the system that has been created.

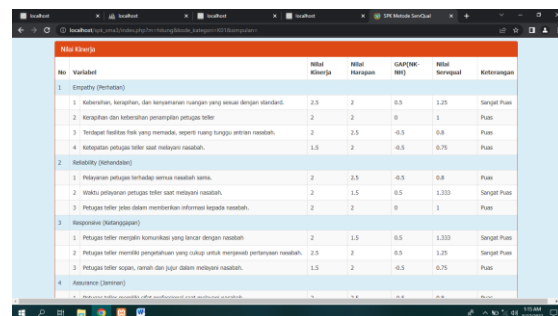


Figure 6. Crisp Value Data Form

The Crisp Value data form is for inputting, editing, canceling and deleting Crisp Value data.

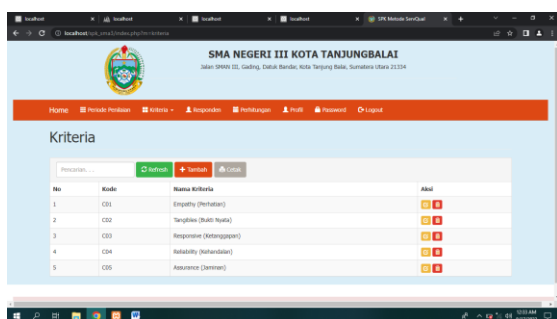


Figure 4. Criteria Data Form

Criteria Data Form, Criteria data form is inputting, editing, canceling and deleting Criteria data.

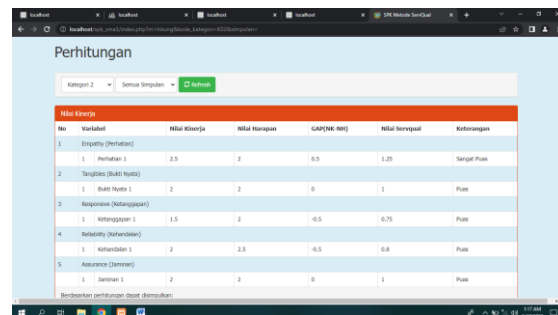


Figure 7. Service Quality Method Calculation Result Form

The Service Quality Method calculation result form is a display of the results of the criteria and category values.

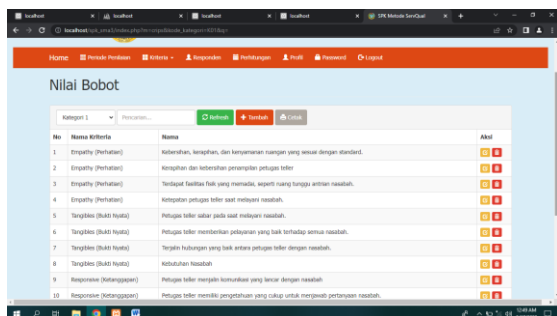
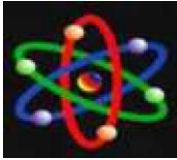


Figure 5. Category Data Form

Category data form is inputting, editing, canceling and deleting Category data.

Based on the results of testing the Service Quality Method calculation system with manual calculations carried out by SMA Negeri 3 Tanjungbalai using the Microsoft Excel application, the final results are close to the same. the final result is nearly the same. Measuring Student Satisfaction at SMA Negeri 3 Tanjungbalai With the Service Quality Method, this method gives results, namely a method with calculations that begins with giving weight to each criterion that has been determined by SMA Negeri 3





Tanjungbalai processed using the Service Quality Method.

From the results of the implementation, it is explained that the decision support system for Measuring Student Satisfaction is a system that provides convenience in solving problems at SMA Negeri 3 Tanjungbalai based on existing criteria easily and quickly obtained in accordance with the results expected by SMA Negeri 3 Tanjungbalai.

CONCLUSION

Measuring Student Satisfaction at SMA Negeri 3 Tanjungbalai was made by the author to facilitate the principal in determining who is eligible to become a teacher with the best service which was previously manual. The application design for Measuring Student Satisfaction at SMA Negeri 3 Tanjungbalai was made to get more objective results. Measuring Student Satisfaction at SMA Negeri 3 Tanjungbalai with the Service Quality Method, so that the results of the assessment have been carried out through many calculation processes, starting from the weighting of values from all criteria and determining the value to the best quality of service at SMA Negeri 3 Tanjungbalai.

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