Analysis of Library Visitor Satisfaction Using the Servqual Method

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ABSTRACT

The purpose of this study was to determine the level of satisfaction of library services with the SERVQUAL method based on five dimensions, such as tangible, reliability, responsiveness, assurances, and empathy. The satisfaction evaluation of library services is needed because the number of library visitors is increasingly decreasing. This study tries to find out the things that cause the number of library visitors to decrease while knowing what services need to be improved. Based on the results of library service evaluation tests, 68% of visitors said they were not satisfied with library services, with an average value of SERVQUAL (-0.2) from 25 criteria and 105 respondents. This data shows some library services that must be repaired by schools by improving facilities and services to visitors.

Keywords: Decision support system, service satisfaction, servqual methods library

Introduction

The library is one of the facilities provided to support the education process. Various information in the library used for student learning and teaching activities. As a library service provider in schools, the library has an essential task in the field of education, namely providing educational, informative, research, recreational, and student intelligence services [1]. Therefore, the quality of school library services must be maintained and improved [2]. Library service is one of the main activities in every library in which the service is an activity that directly related to the community and, at the same time, is a parameter of library success. Library services are activities that provide excellent services as desired by the user in providing information [3].

According to Barata [4], service formed because of the process of providing certain services from the service provider. Achmad et al.

[5] explained that there are seven types of library services, namely referral services, cross-service services, internet services, guidance services, translation services, consulting services, last borrowing and taking services. According to Kotler [6], satisfaction is a feeling of pleasure or disappointment someone who appears after comparing perceptions of the performance results of a product and its expectations. If the performance is below expectations, the customer is not satisfied. The criteria and dimensions used as questions also do not cover all services provided by the library.

Evaluation of library services in several junior high schools in Malang conducted periodically, but the results did not refer to the substance of the service that is wanted. The existing library services had not been considered optimal. It could be seen from the number of visitors there each month, reaching only a maximum of 10 people. The books in the library also look dull and unkempt. Increasing the

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number of reading books is also rarely done by officers because of the lack of visitors. To maximize the service of the library head plans to conduct an evaluation both in terms of library services and facilities by creating a questionnaire tailored to the library service framework. As an initial evaluation, respondents were all library visitors for one semester. The calculation of customer satisfaction used the SERVQUAL method. This servqual method developed by Parasuraman, Barry and Zeithaml [7] has five main dimensions. The five dimensions are as follows: Tangibles, Reliability, Responsiveness, Assurance, Empathy.

For data processing, questionnaires can use a decision support system (Decision Support System). Making a decision support system requires an understanding of how the system created can help solve problems so that the decision support system made can later be used by the head of the library in evaluating library services. Agustina [8] stated that 85% of respondents agree to use DSS in solving problems related to decision making.

Service Quality, according to Parasuraman et al. [9], can be defined as "How far is the difference between the reality and expectations of customers for the services they receive." to be valid and recommendations for improvements made can be made more optimal. This study tries to explore the problems that exist in the library as well as recommend things that need significant improvement and handling.

Study Signification

Servqual Method

According to Kesuma [10], the Servqual Method is a method commonly used to measure the level of service quality in the marketing field by finding a gap between the expectations and perceptions of service users. This method was developed in the 1980s by Zeithaml, Parasuraman, and Berry in measuring the quality of services used as a performance measure of service providers. Through the questionnaire, we can find out how big the gap that exists between the perceptions and expectations of service users towards service providers [11].

The Servqual method includes five dimensions of service quality, namely: Tangibles, Reliability, Responsiveness, Assurance, and Empathy. Each aspect has several questions and answered in the range of grades 1-5, which number 1 represents terrible feelings, and number 5 represents feelings very well. The following is an explanation of the five dimensions above, namely:

1. Tangibles (concrete evidence), describes the physical facilities, equipment, and appearance of the personnel and the presence of the users.
2. Reliability refers to the ability to provide the promised service accurately and reliably.
3. Responsiveness (responsiveness), namely the willingness to help service users and deliver appropriate attention.
4. Assurance is a polite and knowledgeable employee who gives a sense of trust and confidence.
5. Empathy includes care and individual attention to service users.

Service quality is measured by looking at the gap between the expected service quality and received by users. To be able to obtain this gap, the Servqual questionnaire is used, divided into two parts, namely the first part consisting of items that indicated the expectations of the head of the library for the services provided. In contrast, the second part contains details that reported the perceptions of service users (library visitors). Service quality evaluation using the SERVQUAL model includes the difference between the values given by customers for each statement relating to expectations and perceptions (services received by customers). SERVQUAL scores for each report can be calculated based on the following formula [12].

Several things must be considered to measure the dimensions of information service quality by the servqual method, including:

- a. *Determine the variables*

$$\text{SERVQUAL (Q)} = \text{PERCEPTION (P)} - \text{EXPECTATION (H)} \quad (1)$$

Variables are concepts that have variations in value. The variables would be measured to determine the quality of system services information using the servqual method were:

- Independent Variables (X_n) = *Tangibles* (X_1), *Reliability* (X_2), *Responsiveness* (X_3), *Assurance* (X_4), *Empathy* (X_5).
- Dependent Variables (Y) = satisfaction of Information System User.

b. Make and spread questionnaire

Questionnaires were made for 105 respondents in one junior high school in Malang by referring to the variables and five dimensions that have been determined, with a total of 25 questions. Furthermore, the questionnaire was distributed directly to selected respondents taking into account the characteristics and sampling methods that fit the conditions in the field

c. Processing the questionnaire result

$$\text{Quality (Q)} = \frac{\text{Perception (P)}}{\text{Expectation (H)}} \quad (2)$$

The distribution data of the questionnaire before being analyzed was carried out by the editing process, then the tabulation process was carried out, and the results presented in the form of tabulations. Furthermore, the processing results can be processed using a statistical model with Descriptive Analysis and Analysis.

d. Analyze the questionnaire results

The analysis result of the questionnaire processing are targets that used as the goal of achieving the quality level of the existing information system. The final result expressed in numerical values that reflect the level of importance of the variable and dimensions. Determination of the result value based on the gap between the expectations of satisfaction and satisfaction currently received. A negative gap value means lower than expected.

According to Jiwantara [13], the measurement of service quality in the Servqual method based on a multi-item scale designed to measure the expectations and perceptions of

users. As well as the Gap between the two on the five dimensions of service quality namely (tangibles, responsiveness, reliability, assurance, and empathy), the five aspects of condition are elaborated into several questions for expectation attributes and perception variables based on a Likert scale.

The calculation phases for each dimension done in the same way by determining the servqual score for each pair of questions for each customer can be calculated based on the following formula:

Service quality gap scores at various levels in detail can be calculated based on:

- a. *Item-by-item analysis*, misal $P_1 - H_1$, $P_2 - H_2$, etc. Which P = Perception dan H = Expectation.
- b. *Dimensions-by-dimensions analysis*, example: $(P_1 + P_2 + P_3 + P_4 / 4) - (H_1 + H_2 + H_3 + H_4 / 4)$ which P_1 to P_4 and H_1 to H_4 showed the statement of perception and expectations related to certain dimensions.
- c. The calculation of *gap servqual* is $(P_1 + P_2 + P_3 + \dots + P_{22} / 22) - (H_1 + H_2 + H_3 + \dots + H_{22} / 22)$.
- d. To analyze the quality of services provided, the formula is used:
If the quality $(Q) \geq 1$, then the quality of satisfaction level is satisfied enough, and if $(Q) > 0 < 1$, the quality of satisfaction level is quite satisfied. Whereas if $(Q) < 0$ then the quality level of satisfaction is said to be not satisfied.

Results and Discussion

Servqual testing calculations for each dimension

The servqual calculation formula for each statement is in Table 1 as follows:

Table 1. Perception and expectation data

Perception (P)		Expectation (H)	
$\sum STT =$	5	$\sum STT =$	0
$\sum TT =$	20	$\sum TT =$	0
$\sum CT =$	60	$\sum CT =$	105
$\sum T =$	16	$\sum T =$	0
$\sum ST =$	4	$\sum ST =$	0

The Calculation:

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

$$P = (5 \times 1) + (20 \times 2) + (60 \times 3) + (16 \times 4) + (4 \times 5)$$

$$P = 309/105$$

$$P = 2,9$$

Perception Value obtained from the calculation process was 2,9.

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

$$H = (0 \times 1) + (0 \times 2) + (105 \times 3) + (0 \times 4) + (0 \times 5)$$

$$H = 315/105$$

$$H = 3$$

The Expectation Value (H1) obtained from the calculation process was 3. Then it was calculated using the servqual formula as:

$$Q = P - H$$

$$Q = 2,9 - 3$$

$$Q = -0,1 \text{ (not satisfied)}$$

Servqual score for criteria 1 was $P1 - H1 = 2,9 - 3 = -0,1$. The calculation applied to 24 other criteria. If the result value was <0 , then the library visitor satisfaction level was categorized as not satisfied. The value was $>0 <1$, then

the library visitor satisfaction level was categorized (quite satisfied), if the result value was one then the library visitor satisfaction level was categorized (satisfied).

The complete calculation results for each dimension can be seen in Table 2.

Table 2. All categories value

No	Dimension	Statement	Value	Note
1	Tangible	Do you think that reading material in the library is always to the recent date (magazines, newspapers, and books)?	-0,1	Not Satisfied
2	Tangible	How is your need for an internet connection in the library?	-0,2	Not Satisfied
3	Tangible	Is the cleanliness and cleanliness of the tables, chairs, windows, and floors in the library fulfilled clean?	0,1	Quite Satisfied
4	Tangible	Does the Air Conditioner (AC) in the library has it been fulfilled properly?	-0,3	Not Satisfied
5	Tangible	What do you think about the computer facilities in the library, have they been properly fulfilled?	-0,2	Not Satisfied
6	Reliability	Does the arrangement of the books match the labels on the bookshelves as promised by the library?	0,2	Quite Satisfied
7	Reliability	Do you think the library opens every day at the promised time (opens at 07:00 and closes at 13:00)?	0,1	Quite Satisfied
8	Reliability	Do you think that the librarian is always there and on time when you need it (as promised)?	0,1	Quite Satisfied
Continue to be.....				

9	Reliability	Do you think that the presentation of accurate information in the library has been fulfilled well?	0,2	Quite Satisfied
10	Reliability	Does the library provide freedom of time for visitors to the library, in accordance with what the library has promised?	-0,2	Not Satisfied
11	Responsiveness	What do you think about the responsiveness of the officers in the process of borrowing books in the library, is it immediately handled?	-0,3	Not Satisfied
12	Responsiveness	In the process of returning books in the library, will the library staff respond immediately?	-0,2	Not Satisfied
13	Responsiveness	Do you think that the librarian really gives help when you are confused looking for something?	-0,1	Not Satisfied
14	Responsiveness	In the process of custody of goods in the library, is it responded to immediately?	0,1	Quite Satisfied
15	Responsiveness	How did the staff respond when you filed a complaint?	0,1	Quite Satisfied
16	Assurance	How is the security of safekeeping goods in the library, is it guaranteed safe?	0,1	Quite Satisfied
17	Assurance	Do you think that the librarian is friendly to the visitors who come?	-0,1	Not Satisfied
18	Assurance	Are librarians also polite to visitors?	-0,1	Not Satisfied
19	Assurance	Do officials crackdown on visitors who violate library rules and impose sanctions for violators (not keeping the library clean)?	-0,1	Not Satisfied
20	Assurance	Do you think that officers are able to create a conducive atmosphere in the library?	-0,3	Not Satisfied
21	Empathy	Do librarians empathize with your complaints?	-0,1	Not Satisfied
22	Empathy	Do library staff understand and understand the needs of each individual library visitor?	-0,2	Not Satisfied
23	Empathy	Does the librarian understand and understand the reason you are late returning a library book loan?	-0,1	Not Satisfied
24	Empathy	Is the librarian trying to find out what your purpose for coming to the library is by asking you a few questions?	-0,1	Not Satisfied
25	Empathy	Does the librarian understand and understand you when you feel hot in the library by turning on the air conditioner or fan?	-0,1	Not Satisfied
Average of the Value			- 0,2	Not Satisfied

From Table 2 it can be clearly stated which categories and dimensions that need improvement marked with a value <0 than could be followed up by the leadership to improve the condition immediately of the library either on the side of adding facilities or improving service officers. From Table 2, it is known as follows:

1. Tangible Dimensions of 5 questions that had a value <0 were 4 so that the percentage could be calculated at $(4/5) \times 100\% = 80\%$ were not satisfied with library services.
2. Reliable dimensions of 5 questions that had a value <0 was 1 so that the percentage

of $(1/5) \times 100\% = 20\%$ were not satisfied with library services.

3. The responsive dimension of 5 questions that had a value <0 were 3, so the percentage of $(3/5) \times 100\% = 60\%$ were not satisfied with library services.
4. The Assurance dimension of 5 questions that had a value of <0 were 4, so the percentage of $(1/5) \times 100\% = 80\%$ were not satisfied with library services.
5. The Empathy dimension of 5 questions that had a value of <0 were 5 so that the percentage of $(5/5) \times 100\% = 100\%$ were not satisfied with library services.

In total, the dimensions of 25 questions that had a value of <0 were 15 so that the percentage of $(17/25) \times 100\% = 68\%$ were not satisfied with library services.

Conclusion

Based on the calculation of library customer satisfaction with the Servqual Method, the conclusions are:

1. From the calculation of the evaluation results could be seen the level of library visitor satisfaction, Overall the level of library visitor satisfaction was 68% not satisfied, with an average servqual value (-0.2) of 25 assessment criteria and 105 respondents. This showed that the school must repair several library services. This search is in line with the research of [14,15] that a weighted servqual value must be done to improve the quality of its services. The service quality indicator that must be enhanced by the service quality was Lay Out / room layout, adequate space, number of counters, waiting room, Hospitality, Courtesy, and a sense of friendliness towards customers. So, the reality received by the customer is following by the expectations held by the customer.
2. The next step was to followed-up the leader/principal to improve the criteria that made visitors less satisfied with the services in the library.

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