Using the Service Quality approach, an analysis of customer satisfaction in early childhood education at Bina Mulia

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Abstract

Kindergarten is an early childhood education facility, Bina Mulia Cibitung strives to attract and keep clients, specifically parents and guardians of students, by raising the standard ofservice in all areas. Increased customer satisfaction and trust, in this example from the person or guardian of pupils, are anticipated benefits of better service quality. Customers will be satisfied when their needs, wants, and expectations are met or exceeded during a transaction, leading to continued loyalty. Customer satisfaction is defined by research in this paper as a customer's reaction to a difference between the prior degree of importance and the actual performance he perceives after use. A service quality technique is used to gauge how satisfied customers are (customer satisfaction). This strategy makes use of a questionnaire as a tool to help determine what the customer's expectations are as well as their desires and impressions. Additionally, the difference between expectations and perceptions is used to gauge the quality of a service. Customer impressions of the service they actually receive and the service they expect can be compared to determine service quality.

Keywords— Service quality, satisfaction, service, customers

1   Introduction

Kindergarten Bina Mulia Cibitung is a provider of early childhood education, therefore it seems sense that it would work to draw in and keep parents and guardians of students as clients. As a result, feedback is supplied and used as a channel of communication between kindergarten management in research to find the best teacher. Bina Mulia with her clients. The existence of this research is anticipated to result in comments and suggestions for raising educational standards [1].

Service quality can be understood as a gauge of how well each action or activity provided by the provider of the service is received by the consumer; this activity is essentially intangible and does not confer any ownership upon the consumer. Higher levels of service quality offered can result in happier customers.

Customer satisfaction is the result of the customer's reaction to the disparity between the product's prior level ofimportance and the performance he actually experienced after using it. Customer satisfaction can be attained if the company delivers services that are up to par with what the client expects, and vice versa. If the level of service fallsshort of what the consumer expects, they will be disappointed

To gauge customer satisfaction (consumer satisfaction), the service quality approach is used. This strategy makes use of a questionnaire as a tool to help determine what the customer's expectations are as well as their desires and impressions. Furthermore, the difference between expectations and perceptions is used to gauge the quality of a service. Customer impressions of the service they actually receive and the service they expect can be compared to determine service quality [2].

2   Research methods

The research and development technique were applied in this study. The respondents to this study's questionnaire are consumers, and it is used to gather data [3]. The following research processes are done using this

methodology. Analysis of needs, design of the research, and creation of software. This study is designed to describe the degree of consumer satisfaction, specifically for the characteristics that require quick attention .

1.1 Needs Analysis

. The user's opinion of a product's or service's ability to live up to expectations is what determines customer happiness. If expectations are exceeded, users will be extremely satisfied. If expectations are fulfilled, users will be content

1.2 Service Quality Method

Service quality, or Servqual, is a method for measuring how customers view the services of a company or agency that provides services. Servqual is used to gauge customer perceptions of a company's or agency's services.

Customers' impressions of the service they really receive and the service they actually expect can be compared to determine the level of service quality. So that the gap between customer expectations and the actual services they receive can be measured in terms of service quality. The primary factor that the organization takes seriously and for which it uses all of its resources is service quality. Therefore, the customer's evaluation of service quality is based on a comparison of the company's performance with the customer's own expectations.

The servqual approach examines the discrepancy between expected service and perceived service, the two key variables. The service quality score (Q) can be calculated by deducting the customer perception scores from expectations, which can be written as follows: $Q = P - E$. Service quality is defined as the difference between customer expectations (E) and their perception of the service provided by Shigeru's customers (P).

According to this model, it is feasible to gauge the gap between a customer's level of service expectation and experience, as well as their level of satisfaction, while assessing service quality. The Serqual approach examines the discrepancy between expected service and perceived service, the two key variables

1.3 Research design

1. Data collection

Data collection is the initial step in gathering data related to or even similar to an existing problem in order to confirm what other researchers have already discovered.

a. Questionnaire

A questionnaire is a way of gathering data in which respondents are asked a series of questions or given written responses. The most effective way to gather data is through the use of questionnaires, which may be distributed widely and used with a big number of respondents [4].

Questionnaire for assessing perceptions that were created using tools or Likert scale assessments in accordance with the Serqual technique [5]. There are five components to the Serqual method: accountability, assurance, empathy, concreteness, and dependability.

Table 2.1. Reality questionnaire

No.	Statement	Target				
		SK	K	C	P	SP
1	How to teach					
2	Teacher neatness					
3	The ability of students to receive material					
4	Tuition fees					
5	Delivery of information quickly					
6	ties to one's parents or other legal guardians					

Evaluation of the impression of a Likert scale questionnaire with tools or dimensions based on the servqual technique

b.   Observation
        Documentation is the process of gathering data by making notes on company-owned papers. Due to their involvement in the field, researchers will collect data and create documentation.

c.   Observation
        Direct observation of the thing being studied while it is being used for research purposes allows for the discovery of employee behavior, work procedures, and other information using this method.

d.   Literature review
        Literature study is a technique for gathering data that involves reading books, articles, journals, and references about earlier studies associated with the one being conducted.

2.   Data processing

The research was carried out in kindergarten, and the questionnaire that was issued was a service questionnairein the form of teaching and learning activities and other activities, a parent/guardian questionnaire Bina Mulia.
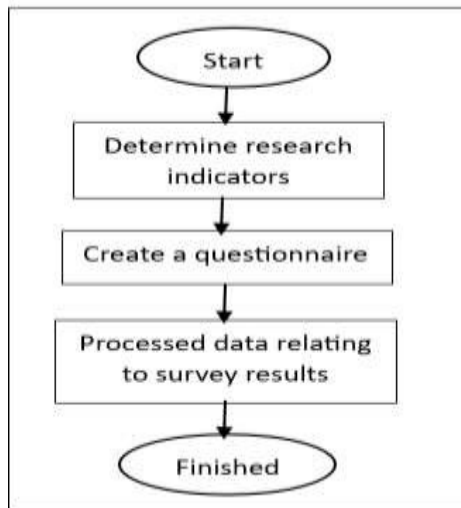
3.   Flowchart of data processing

Figure 2.1. Flow diagram

3   Results and Discussion

1.   Data description

The information was gathered through the answers to a questionnaire that details the criteria and is presented astables, as in the table below:

Table 3.1. Questionnaire data description

R	x1	x2	x3	x4	x5	x6	T
1	3	4	3	2	3	3	18
2	3	3	3	4	4	3	20
3	3	5	3	3	3	3	20
4	3	4	3	3	3	4	20
5	3	2	4	3	4	5	21

6	4	3	3	3	3	3	19
7	3	5	4	3	3	4	22
8	3	3	4	3	5	3	21
9	3	3	4	4	3	4	21
10	3	4	2	3	3	3	18
11	3	3	2	2	3	4	17
12	3	4	4	3	3	3	20
13	3	3	3	3	4	4	20
14	3	3	4	4	3	4	21
15	4	4	3	3	5	4	23
16	3	4	2	5	3	3	20
17	3	3	4	4	2	3	19
18	4	4	5	3	5	5	26
19	3	3	4	4	3	3	20
20	4	4	4	3	5	4	24
21	4	4	3	3	5	4	23
22	4	4	4	3	4	4	23
23	4	3	4	4	3	3	21
24	3	4	4	5	3	3	22
25	5	2	4	4	3	3	21
26	4	3	4	4	4	4	23
27	4	4	3	3	3	3	20
28	3	3	4	3	5	3	21
29	4	4	4	3	3	3	21
30	3	3	3	4	4	4	21
31	3	5	3	3	3	3	20
32	4	4	4	4	3	3	22
33	4	4	4	5	3	3	23
34	5	3	3	4	4	2	21
35	3	3	5	4	3	3	21

2.   Calculating Gaps

The gap is between what the client expects from the service and what the customer actually experiences (in this instance, the tutor is the customer) [6]. calculation of data from 35 respondents' responses to gap services. calculation of service expectations from customers

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

Where : $\sum y_i$ = the weight of the sentence as a whole corresponds to expectation variable i.
$\sum STT$ = unhappy at the low number of people who voted for the solution.
$\sum TT$ = the amount of votes cast for an answer was not reached
$\sum CT$ = the number of respondents who selected a response is sufficient
$\sum T$ = the amount of votes cast in favor of an answer was obtained
$\sum ST$ = the number of voters for a certain response was extremely high

1,2,3,4,5 = the Likert scale's rating

Calculating the service reality gap through simulation

$\sum y1 = (0 \times 1) + (0 \times 2) + (20 \times 3) + (12 \times 4) + (3 \times 5) = 0 + 0 + 60 + 48 + 15 = 123$
$\sum y2 = (0 \times 1) + (2 \times 2) + (15 \times 3) + (15 \times 4) + (3 \times 5) = 0 + 4 + 45 + 60 + 15 = 124$
$\sum y3 = (0 \times 1) + (3 \times 2) + (12 \times 3) + (18 \times 4) + (2 \times 5) = 0 + 6 + 36 + 72 + 10 = 124$
$\sum y4 = (0 \times 1) + (2 \times 2) + (18 \times 3) + (12 \times 4) + (3 \times 5) = 0 + 4 + 54 + 48 + 15 = 121$
$\sum y5 = (0 \times 1) + (1 \times 2) + (21 \times 3) + (7 \times 4) + (6 \times 5) = 0 + 2 + 63 + 28 + 30 = 123$
$\sum y6 = (0 \times 1) + (1 \times 2) + (20 \times 3) + (12 \times 4) + (3 \times 5) = 0 + 2 + 60 + 48 + 15 = 125$

How to determine the service expectation gap

$\sum y1 = (0 \times 1) + (0 \times 2) + (0 \times 3) + (12 \times 4) + (23 \times 5) = 0 + 0 + 0 + 48 + 115 = 163$
$\sum y2 = (0 \times 1) + (0 \times 2) + (0 \times 3) + (20 \times 4) + (15 \times 5) = 0 + 0 + 0 + 80 + 75 = 155$
$\sum y3 = (0 \times 1) + 0 \times 2) + (2 \times 3) + (20 \times 4) + (12 \times 5) = 0 + 0 + 6 + 80 + 60 = 146$
$\sum y4 = (0 \times 1) + (0 \times 2) + (2 \times 3) + (20 \times 4) + (13 \times 5) = 0 + 0 + 6 + 80 + 65 = 151$
$\sum y5 = (0 \times 1) + (0 \times 2) + (3 \times 3) + (12 \times 4) + (20 \times 5) = 0 + 0 + 9 + 48 + 100 = 157$
$\sum y6 = (0 \times 1) + (0 \times 2) + (0 \times 3) + (12 \times 4) + (23 \times 5) = 0 + 0 + 0 + 48 + 115 = 163$

The gap value measures the difference between service users' expectations and actual service quality statements. Consumer expectations regarding the service they want to learn more about and the typical service reality they observe in everyday situations The gap value is calculated using the formula below:

$$SQ_i = \overline{X_i} - \overline{Y_i}$$

Where :
SQi = Value for the i-th attribute's gap

$\overline{X_i}$ = The i-th attribute's average value

$\overline{Y_i}$ = The average of the i-th attribute

Customers' perceptions of service reality (interval 5) in the service quality attribute are related to the average value of customer expectations for service

Table 3.2. service quality

Statement	Service expectations		Service statement		Gap value
	weighting	Average	weighting	Average	
1	163	4,66	123	3,51	1,15
2	155	4,43	124	3,54	0,89
3	146	4,17	124	3,54	0,63
4	151	4,31	121	3,46	0,85
5	157	4,49	123	3,51	0,98
6	163	4,66	125	3,57	1,09

The worse the service quality, the bigger the Servqual Gap calculation discrepancy. Therefore, the biggest gaps or discrepancies are the ones that need the most improvement in terms of service quality [7]. In contrast, the higher the level of service quality, the smaller the difference (the difference is close to zero or positive).

3. Interface design

The process of defining anything that involves a number of different methodologies, a description of the architecture and specific parts [8], as well as the constraints that will be encountered during the process:

1. User login

Figure 3.1. Data entry forms

2. Questionnaire forms

Figure 3.2. questionnaire form

3. Survey graph :

Figure 3.3. Survey chart

4   Conclusion

The Service Quality approach offers a reliable method to accurately determine the extent of the gap between a predefined indicator and customer satisfaction levels. By utilizing this approach, organizations can effectively measure and evaluate the value of the achieved gap. In terms of enhancing service quality, research findings

indicate that the first and sixth statement attributes, which pertain to teaching methods and the relationship with parents/guardians, exhibit the largest gaps and therefore require prioritization. Prior to administering the main questionnaire, it is advisable to conduct testing and validation on the questionnaire itself to ensure its effectiveness.

5 Suggestion

In order to guarantee user satisfaction with the service, regular surveys are conducted according to a predetermined schedule [9]. These surveys are carried out at regular intervals to gather feedback and assess the users' level of contentment. Additionally, various techniques are employed during the development process to enhance the accuracy of research findings and ensure the correctness of suggested outcomes [10]. These approaches enable a more precise analysis and help in providing valuable insights for improving the service.

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