

Implementing Customer Relationship Management to Increase Education Service using Service Quality Method

Ali Ibrahim¹⁾, Shabrina Amatullah^{2)*}

¹⁾²⁾ Department of Information Systems, Faculty of Computer Science, University of Sriwijaya
Ogan ilir, Indonesia

¹⁾aliibrahimok@gmail.com

²⁾shabrinaamatullah@gmail.com

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Abstract

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Schools are one means for students to get education services. Therefore, schools are required to be able to provide good facilities and services for young people who are able and able to work together in community development. However, on the side of customer satisfaction, the school still has shortcomings and not yet optimal, for example seeing the satisfaction of the parents of students, teachers, and students all used questionnaires that are only used in the Certain period of time such as UAS, complaints, criticism advice and consultation are still not stored well (paper-based). In the CRM concept itself has a goal in terms of customer satisfaction, how to see and measure these things, how to formulate and get a definite value of customer satisfaction. then to get valid values used questionnaire instrument, then for the calculation using one method, namely service quality (servqual) which is done by calculating the difference between customer perceptions and customer expectations of a school in accordance with 5 dimensions of service quality, namely: Tangibles (proof measured), Reliability, Responsiveness, Assurance, and Empathy. That it can be seen the value of school customer satisfaction is -0.19 (parents), -0.384 (students) and -0.2167 (teachers). It can be concluded that the value of school customer satisfaction is in the moderate classification, the results of this calculation can be used as a benchmark for improving education services.

I. INTRODUCTION

In times of globalization, making the technology becomes the basic needs of every person. The development of technology is necessary for parents to young children. In addition, advances in technology have an important role in the education world, through the power of technology allows people to get information quickly without hampered by the limits of space and time.

The school is one means for students to get an education. Therefore, schools are required to provide facilities as well as good service to prepare the young generation that is reliable and able to work together in the development of society. SMA Negeri 2 Tanjung Raja is one of the schools in Ogan Ilir has graduated many students since 19 years ago. SMA Negeri 2 Tanjung Raja has a lot of graduate students who are now scattered in various universities, both public and private. However, the management of the school in terms of customer satisfaction is the parents, students, and teachers have not run optimally and have not controlled either making it difficult for the schools in monitoring how customer satisfaction school in the school.

For example, to determine customer satisfaction, the school handed over the questionnaire form distributed twice a year to students during final exams semester of the school service facilities and infrastructures such as schools, how teachers teach and so forth. When students want to make a complaint or submit suggestions to the school.

* Corresponding author

Students must come go to the administration to take a complaint form, and the consultation between the parents and the students must come to school to meet the teacher concerned.

All the processes that occur on the part of parents, students, and teachers are about how the school to determine the level of customer satisfaction they have a problem. Data shown in the report of the questionnaire is still not in accordance with the objective of the questionnaire, as their questions was not right so it does not describe in terms of customer satisfaction of the school, the charging time of form questionnaire was also filled in during certain times such as when the UAS, the data recap questionnaire has not been stored in the database so prone to experience a loss of data, and the data of criticism and suggestions and complaints from students are also not well documented for a complaint form of administration is still paper-based and data entry using handwriting so it is susceptible to errors in the read data, the difficulty of parents and students who want to talk to the teacher as to consult customers have come to see the teacher. In filling out the questionnaire itself has the disadvantage that the lack of management questions of the questionnaire as well as the unavailability of features to communicate further response from school to school customers.

Some definitions of Customer Relationship Management: Customer Relationship Management (CRM) is a strategy to acquire, analyze the data, then used to interact with customers (users of service go to school: students, teachers, and parents), will create a good relationship to customers [5][16]. CRM (Customer Relationship Management) is an enterprise business to keep customers, forming a customer loyalty by doing things in the form of customer interactions include telephone, email, SMS gateway, criticism and suggestions feedback on the website [6][18]. According to the journal [3][19] "Customer Relationship Management (CRM) is a business philosophy that describes a client placement strategy as a central processor and cultural activities. This concept has been known and widely implemented to improve services in the enterprise. " Based on the opinion of experts, it can be concluded Customer Relationship Management is a strategy or a good way in the field of business and others to maintain contact with customers both existing customers past and new customers as well as the best ways to improve service and customer loyalty to the company.

For schools, especially for school leaders, hoping to be able to determine the level of customer satisfaction in this school that parents, students, and teachers. They are one important component in efforts to improve educational services, so it is seen the need to make a proposal specific information system capable of facilitating the management of the school customer satisfaction.

Starting from a system that is able to provide feedback to customers about the importance of their opinions and thus creating a 2-way relationship between the school and school customers. Educational services can be defined by educational services. Said services (service) itself has several meanings, ranging from personal care (personal service) to the service as a product [7][20]. Then, features the addition of a question questionnaire designed to keep up with developments. Service quality method consists of five dimensions of service quality, namely: Tangibles (measurable evidence), Reliability (reliability), responsiveness (responsiveness), assurance (assurance), and Empathy (empathy) [1][12][14]. Thus, the proposed system will apply the concept of Customer Relationship Management (CRM) for focusing on customer satisfaction.

Below are the benefits that can be gained through this research: Help school leaders to see the level of customer satisfaction in schools, teachers, parents, and students. Makes it easy for schools to deliver customer complaints and criticism, and suggestions to the school, as well as consultation between parents, students, and teachers. Helping the school leaders improve educational services by making better decisions.

To avoid the subject so as not to deviate and widening of the scope of the problem, the authors have chosen foci will be addressed in this study are: The object of this study was SMAN 2 Tanjung Raja. System development method using the method Prototyping for analysis using methods Service quality (Service Quality). Customers who are in the system: Teachers, Parents, Students and student as an administrator as well as the Deputy Head of School that only access the reports from the system. This system is focused on customer satisfaction by means of surveys of customer satisfaction, service complaints and criticism, and suggestions as well as consultancy services.

II. METHODS

In a study conducted by researchers in developing the system was Prototyping Method [21]. A prototype is not something that is complete, but something that must be evaluated and modified back [8]. Here are the steps in designing a system that I use in the prototype system development mechanism, the steps are: [9] Communication, the early stages of a prototype model to identify the problems that exist, as well as other information necessary for the development of the system. Planning quickly, this stage is done by determining the activity of resources, the specifications for the development of systems based on the needs and objectives based on the results of the communications made so that development can be as expected. Modeling, the next stage is a representation or

describe the system model which will be developed as the design process by using Data Flow Diagrams (DFD), inter-entity relationships necessary and interface design of the system to be developed. [15] Construction (prototype formation), this stage is used to build a prototype and test-systems developed. The installation process and providing user-support is also done so that the system can run properly. Submission, these steps are necessary to get feedback from users, as a result of the evaluation of the previous stages and implementation of the systems developed.

One approach is the method of service quality developed [10] in the 1980s. This method is done by way of comparison between customer perception and expectations of the customers of a company [10]. Step inside wearing service quality method is the first to define the variables and dimensions, here using five dimensions that is tangible, reliable, responsiveness, assurance, empathy. Next, create and spread the questionnaire, and then process the data and final results of questionnaires to analyze data processing results of the questionnaire. If the value is worth the negative Service quality the customer satisfaction score bad, but if it is positive, then the value of customer satisfaction very -good [1]. The formula determines the actual value of service quality namely: [2][17]

$$\text{Actual value Service quality: } \frac{\text{Value Perception}}{\text{Value Hope}} \times 100 \quad (1)$$

Furthermore, the service quality value calculation formula is: [13]

$$\text{Service quality value (gap) = Value Perception (performanc) - Value Hope} \quad (2)$$

Then determine the interval assessment formula is: [11]

$$\text{Interval: } \frac{\text{Score maximal} - \text{Score Minimal}}{\text{Number of Criteria}} \quad (3)$$

As well as the formula to calculate the value perceptions and expectations of customers: [10][22]

$$\text{Value Perception} = \frac{\sum \text{Question value of each dimension}}{\sum \text{Total question}} \quad (4)$$

III. RESULTS

Servqual (GAP) is obtained from the difference between performance with the expectation that will explain the level of service quality, the lowest quality that occurs when below expectations, namely when the performance is at least 1 and the maximum expectation is 5 so the value is $1-5 = (-4)$. The highest quality achieved when performance exceeds expectations, namely when the maximum performance is 5 and the minimum expectation of 1 is a value of $5-1 = 4$. Getting the highest score 4 and the lowest value (-4) .

$$\text{Interval} : \frac{4 - (-4)}{5} = 1,6$$

The interval obtained (Table 1):

TABLE 1.
CRITERIA FOR ASSESSMENT SERVICE QUALITY

	Level Expectations
(-4.00) - (-2.40)	Very Bad
(-2.41) - (-0.80)	Bad
(-0.81) - (0.80)	Moderate
0.80 To 2.40	Good
2.41 To 4.00	Very Good

Classification of types of respondents can be seen in the criteria for respondents (Table 2):

TABLE 2.
CRITERIA FOR RESPONDENTS

User	Frequency
Parent	30
Student	30
Teacher	20

Here (Table 3) are the results in tabular form based on their dimensions for all customers:

TABLE 3.
 VALUE SERVICE QUALITY PARENTS

No	QUESTION	Performance	Hope	GAP	Criteria
Tangibles (Physical Form)					
1	Available For A Meeting Or A Meeting Hall With A Parent	4.4	3.8	0.6	Moderate
2	Schools Provide The Tools To Support A Meeting Or Meetings Of Parents (LCD, Projector, Etc.)	4.4	4	0.4	Moderate
3	Sufficient Availability Of All Field For Sports Students.	3.8	3.8	0	Moderate
4	The State Of The Building Is Clean And Orderly	4	4.2	-0.2	Moderate
5	There Mosque Hall, Canteen, and Toilet	3.6	4.6	-1	Bad
	Average	4.04	4.08	-0.04	Moderate
Reliability (Reliability)					
6	Can Access Information Announcement	4.2	4.4	-0.2	Moderate
7	Can Access News Information	4	4.4	-0.4	Moderate
8	Information Can Access The Achievement Of Students Each Year	3.8	4.6	-0.8	Moderate
	Average	4	4.46	-0.46	Moderate
Responsiveness (Response)					
9	Schools Willing To Respond To Complaints Of Parents Or Students, and teachers.	4.6	4.6	0	Moderate
10	Schools Willing To Respond To Criticism And Suggestions Of Parents Or Students, and teachers.	4.2	4.6	-0.4	Moderate
11	Schools Provide Consultancy Services.	4.2	4.6	-0.4	Moderate
	Average	4.33	4.6	-0.2	Moderate
Assurance (Assurance)					
12	If A Student Would Be Sent Home Sick	4	4.2	-0.2	Moderate
13	If Students Are Late At The School Responsible Shuttle Waiting For Students To Be Picked Up.	4	3.8	0.2	Moderate
	Average	4	4	0	Moderate
Empathy (Empathy)					
14	Schools Provide Opportunities For Students To Participate In Various Championships.	4.6	4.6	0	Moderate
15	Schools Pay Attention To Improvement In Student Achievement	3.8	4.2	-0.4	Moderate
	Average	4.2	4.4	-0.2	Moderate
	The Average Total	4.1	4.3	-0.19	Moderate

Table 4 Value Service Quality Parents, the average on each dimension of quality of service, including the criteria for moderate and average total GAP or quality level of (-0.19) is in the middle criteria. In this GAP satisfaction classification included in the classification being, meaning the quality of existing services in SMAN 2 Tanjung Raja feels mediocre.

Table 5 Value Service Quality Students, the average on each dimension of quality of service, including the criteria for moderate and average total GAP or level of quality equal to (-0,348) is in the middle criteria. In this GAP satisfaction classification included in the classification being, meaning the quality of existing services in SMAN 2 Tanjung Raja feels mediocre.

Table Value Service Quality Teacher, the average on each dimension of quality of service, including the criteria for moderate and average total GAP or level of quality equal to (-0.2167) is in the middle criteria. In this GAP satisfaction classification included in the classification being, meaning the quality of existing services in SMAN 2 Tanjung Raja feels mediocre.

IV. DISCUSSION

For consideration in formulating this article, the author takes a reference to the research conducted is in implementing Customer Relationship Management on the service in Indie Cakes, this study uses a method that compares Service quality customer perceived value to the value of customer expectations expressed in percent [2]. Then, in implementing Customer Relationship Management at Toko YEN-YEN by providing more interaction to customers about information like promotion etc. and can provide comments and suggestions by the landlord can view reports of sales/month, reports best-selling products, and loyal customers report [3]. Further research by proposing a system to improve the quality of services in LBPP LIA Martadinata Bandung, researchers used a

questionnaire to identify the 5 dimensions were then calculated based on each dimension using service quality method and the results in the form of assessment questionnaires based gap consisting of 5 gap [4] , In line with the research undertaken researchers now are Application Customer Relationship Management to Improve Education Services by Using Method of Service Quality based on 5 dimensions but each dimension has different attributes than earlier studies. Expectations from this research that the school leaders know the school customer satisfaction in the school.

TABLE 4.
 VALUE SERVICE QUALITY STUDENTS

No.	QUESTION	Performance	Hope	GAP	Criteria
Tangibles (Physical Form)					
1	Availability Of Finding Information Such As An Internet Connection	4	4.4	-0.4	Moderate
2	Adequate Parking Space	4.2	4.4	-0.2	Moderate
3	A Class Room, Mosque, Health, Counseling Comfortable, Clean And Tidy	3.8	4.2	-0.4	Moderate
4	The State Of The Building Is Clean And Orderly.	4	4.4	-0.4	Moderate
5	Completeness Of Equipment (Hardware) Such As Projectors, Computers, Etc.	3.6	4.4	-0.8	Moderate
	Average	3.92	4.36	-0.44	Moderate
Reliability (Reliability)					
6	Information Can Access The Data Of Teachers, Students, and Parents	4	4	0	Moderate
7	Can Access News Information School Announcements	4.6	4.4	0.2	Moderate
8	Achievement Can Access Information, School Information, Photo Galleries	4.8	4.6	0.2	Moderate
	Average	4.46666667	4.33333	0.133333	Moderate
Responsiveness (Response)					
9	Quickly In Response To Complaints Of Students	3.4	4.6	-1.2	Bad
10	Quickly In Response To Criticism And Suggestions Of Students	4	4.4	-0.4	Moderate
11	The Location Is Easily Accessible Library	3.8	4.4	-0.6	Moderate
	Average	3.733333333	4.46667	-0.73333	Moderate
Assurance (Assurance)					
12	School Officials, Staff Is Always Professional And Friendly Bersikapp	4.2	4.4	-0.2	Moderate
13	Security Guard Be Professional And Provide A Sense Of Security for Students	3.6	4	-0.4	Moderate
	Average	3.9	4.2	-0.3	Moderate
Empathy (Empathy)					
14	The Same Consultancy Services To All Students Regardless Of Social Status	4	4.4	-0.4	Moderate
15	Time And Time Consulting Services According to To The Needs Of Students	4	4.4	-0.4	Moderate
	Average	4	4.4	-0.4	Moderate
	The Average Total	4.004	4.352	-0.348	Moderate

In Fig. 4, the admin will give each user account in order to access these systems, specifically for students can register through the register button that has been provided. In Fig. 5, contains a list of questions the user

questionnaire (parents) by the 5th dimension service quality method that is tangible, reliable, responsive, assurance and empathy. While the administrators can add, edit, delete the question. In Fig. 6, users can submit complaints and be responded to by the admin regarding these complaints. This is consistent with the design of the system for the creation of a satisfaction with the system has been used. In the concept of CRM (Customer Relationship Management) itself has a goal in terms of customer satisfaction, how to see and measure it, how to formulate and get a definite value of customer satisfaction. then to get a valid value used questionnaire instrument, then the calculation of one method of service quality by dividing into Several dimensions in this study. The results of the calculations that are used as a benchmark to improve education services.

TABLE 5.
VALUES SERVICE QUALITY TEACHERS

Nos	QUESTION	Performance	Hope	GAP	Criteria
Tangibles (Physical Form)					
1	Availability Of Finding Information Such As An Internet Connection	4.2	4.2	0	Moderate
2	Parking Area, Restrooms For Adequate Teachers	4.2	4	0.2	Moderate
3	Completeness Of Equipment (Hardware) Such As Projectors, Computers, Etc.	3.8	4.2	-0.4	Moderate
4	A Class Room, Mosque, Health, Counseling Comfortable, Clean And Tidy	3.6	4	-0.4	Moderate
	Average	3.95	4.1	-0.15	Moderate
Reliability (Reliability)					
5	Information Can Access The Data Of Teachers, Students, and Parents	4.2	4.6	-0.4	Moderate
6	Can Access News Information School Announcements	4.2	4	0.2	Moderate
7	Achievement Can Access Information, School Information, Photo Galleries	4.2	4.4	-0.2	Moderate
	Average	4.2	4.33333	-0.1333	Moderate
Responsiveness (Response)					
8	Schools Willing To Respond To Criticism And Suggestions Of Parents Or Students, and teachers.	4	4	0	Moderate
9	Schools Willing To Respond To Complaints Of Parents Or Students, and teachers.	4	4.2	-0.2	Moderate
10	My Parents Are Willing To Respond To The Consultation.	4.2	4.2	0	Moderate
	Average	4.066666667	4.13333	-0.0667	Moderate
Assurance (Assurance)					
11	I Always Respond To The Consultation Of Students	3.8	4.2	-0.4	Moderate
12	I Always Give The Student Exercises Every Instruction Ends Through Consultation / Representation Of Students	3.2	4	-0.8	Moderate
	Average	3.5	4.1	-0.6	Moderate
Empathy (Empathy)					
13	Clarifying Explanations When Students Misunderstand	3.8	4.2	-0.4	Moderate
14	Returns All Responses Or Questions Students	4	4.2	-0.2	Moderate
15	Provide Opportunities For Students To Engage Actively With Filling Consultation Lesson	4.2	4	0.2	Moderate
	Average	4	4.13333	-0.1333	Moderate
	The Average Total	3.943333333	4.16	-0.2167	Moderate

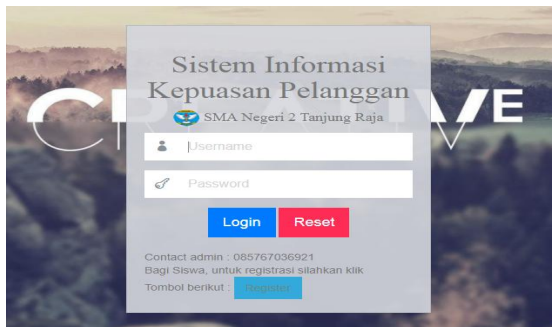


Fig. 2. Page Login

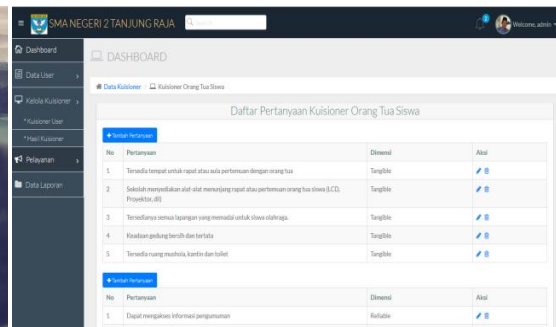


Fig. 3. Question Questionnaire

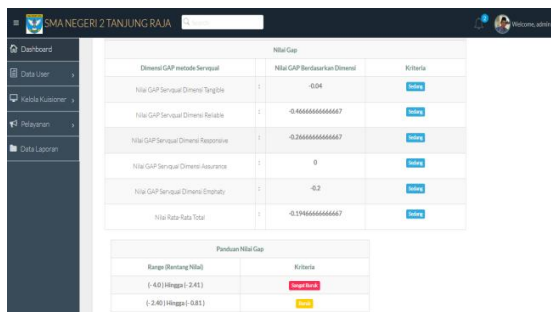


Fig. 4. Calculation Results Service quality

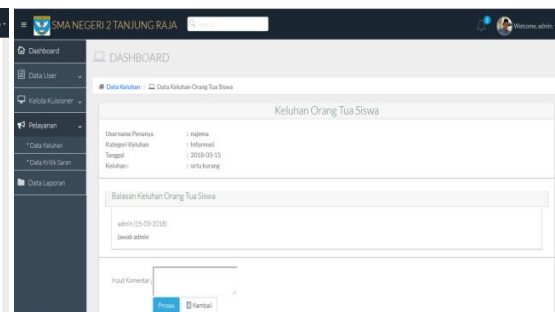


Fig. 5. Complaints

V. CONCLUSIONS

Based on the results of research conducted by the author and the discussion described earlier, the system built has several advantages, namely the existence of every right access for each user, the creation and storage of the results of questionnaires from users stored in the database, calculation of the results of questionnaire analysis based on input from the user. by implementing Customer Relationship Management (CRM) can be used as a benchmark to improve services to users. This system contains a special menu for complaints, consultation, and suggestion criticism so that each user can submit a suggestion, consultation, or complaint directly to school to be followed up. Reports have provided reports for administrators and school officials, namely questionnaire results reports, suggestions and complaints criticism reports based on input from user systems built. And overall school customer satisfaction is on medium criteria and consumer expectations are at very high criteria. But the quality of service is felt to be moderate or ordinary so it has not been able to provide satisfaction to consumers.

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