

Improving the Quality of Islamic Boarding School Services Based on the Needs of Students: Implementation of ServQual and QFD

Perbaikan Kualitas Layanan Pesantren Berbasis Kebutuhan Santri: Implementasi ServQual dan QFD

<https://doi.org/10.24036/pakar.v23i2.786>

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Abstract

The quality of education is a crucial factor for the progress of the nation in forming a high-capacity and moral society. Pesantren, as boarding educational institutions in Indonesia, have more complex service demands than non-Islamic boarding schools because they manage formal and non-formal programs. Initial studies at Islamic Boarding School XYZ showed that there had been no improvement in services based on Voice of Customer. This study aims to maximize the quality of Islamic Boarding School XYZ services by focusing on the five dimensions of SERVQUAL (physical evidence, reliability, responsiveness, assurance, and empathy). Data collection was carried out through questionnaires distributed to students as respondents. Data analysis was carried out by implementing the SERVQUAL method to identify service gaps and Quality Function Deployment (QFD) to formulate action plans based on improvement priorities. The results of the study identified 19 service attributes that needed improvement. These improvement recommendations were compiled based on a comprehensive analysis using SERVQUAL and QFD, providing concrete guidance for XYZ Islamic Boarding School to effectively improve the quality of services based on the needs of students.

Keywords: ServQual, QFD, voice of customer, service quality improvement, islamic boarding school.

Abstrak

Kualitas pendidikan merupakan faktor krusial bagi kemajuan bangsa dalam membentuk masyarakat berkapasitas tinggi dan bermoral. Pesantren, sebagai lembaga pendidikan berasrama di Indonesia, memiliki tuntutan layanan yang lebih kompleks dibanding sekolah non-pesantren karena mengelola program formal dan non-formal. Studi awal di Pesantren XYZ menunjukkan belum adanya perbaikan layanan berbasis *Voice of Customer*. Penelitian ini bertujuan memaksimalkan kualitas layanan Pesantren XYZ dengan fokus pada lima dimensi ServQual (bukti fisik, keandalan, ketanggapan, jaminan, dan empati). Pengumpulan data dilakukan melalui kuesioner yang disebarkan kepada santri sebagai responden. Analisis data dilakukan dengan mengimplementasikan metode ServQual untuk mengidentifikasi kesenjangan layanan dan *Quality Function Deployment* (QFD) untuk merumuskan *action plan* berdasarkan prioritas perbaikan. Hasil penelitian mengidentifikasi 19 atribut layanan yang memerlukan perbaikan. Rekomendasi perbaikan ini disusun berdasarkan analisis komprehensif menggunakan ServQual dan QFD, memberikan panduan konkret bagi Pesantren XYZ untuk meningkatkan kualitas layanan yang berbasis kebutuhan santri secara efektif.

Keywords: ServQual, QFD, suara pelanggan, perbaikan kualitas layanan, pesantren.

1. Introduction

In an increasingly competitive environment, improving service quality has become a critical factor in ensuring the sustainability of organizations, including educational institutions. Consumers tend to favor service providers that meet their expectations and needs, making service quality perception a key determinant of customer loyalty (Aprianto & Fatah, 2021). Consequently, organizations must proactively identify and prioritize the most critical dimensions of service quality that contribute to customer satisfaction. Within the context of education, service quality encompasses not only administrative and academic aspects but also reflects the institution's commitment to supporting a holistic and effective learning process.

Education plays a central role in shaping national progress. As a foundational element in the development of human capital, education aims to cultivate individuals who excel not only intellectually but also morally. This aligns with Indonesia's National Education System Law No. 20 of 2003, Article 1, Paragraph 1, which defines education as a conscious and planned effort to create an atmosphere and learning process that enables students to actively develop their potential (UU No. 20 Tahun 2003). In the era of the Fourth Industrial Revolution, where global challenges and rapid technological advancements prevail, investing in quality education has become increasingly essential to produce competitive, adaptable, and innovative human resources.

One distinctive form of educational institution in Indonesia is the pesantren, or Islamic boarding school, which plays a vital role in the national education system. Unlike general schools, pesantren offer more complex services as they manage both formal education programs and various non-formal initiatives aimed at comprehensive student development. These include moral education, classical Islamic text learning, Qur'anic memorization programs, language training, and practical skill development (Irsalulloh & Maunah, 2023). Such diversity in programming results in greater service demands from santri (students), who are the primary users of educational services in these institutions. As a result, enhancing service quality in pesantren must be grounded in the specific needs and expectations of the santri, embodying the concept of the Voice of the Customer (VoC).

Preliminary findings at Pesantren XYZ indicate that current service quality improvement efforts are not yet fully aligned with santri's aspirations and expectations. This misalignment creates a gap between provided services and student expectations, potentially reducing overall satisfaction. Therefore, a structured and measurable approach is necessary to bridge this gap and ensure service improvements are both effective and targeted. One promising approach is the integration of the ServQual method with Quality Function Deployment (QFD).

ServQual is a diagnostic tool used to assess the gap between customer perceptions and expectations across five key dimensions: tangibles, reliability, responsiveness, assurance, and empathy. By applying ServQual, institutions can obtain reliable insights into which aspects of their services require enhancement. Complementing this, QFD is a quality planning method that translates customer needs into concrete and measurable improvement actions. Although the application of QFD in the education sector is still relatively limited, particularly in developing countries, it has proven effective in guiding strategic service redesign based on prioritized customer needs (Yahia-Berrouiguet & Belabid, 2022).

Based on this background, the present study aims to develop a strategy for improving service quality at Pesantren XYZ by integrating ServQual and QFD methodologies. This combined approach is expected to provide a comprehensive understanding of santri satisfaction levels, identify the most critical service attributes requiring improvement, and formulate targeted recommendations for service enhancement. The outcomes of this research are anticipated to offer

not only practical contributions to quality management in Islamic boarding schools but also theoretical contributions to the broader discourse on education service quality management, particularly in the context of developing countries.

2. Literatur Review

2.1. Service Quality in the Context of Pesantren Education

Service quality is a crucial factor in the sustainability and competitiveness of an organization, including educational institutions. Services are intangible and involve interaction with customers, demand speed, and adaptation to users' specific needs (Jacobs & Chase, 2020). In this context, service quality is defined as the expected level of excellence and the organization's ability to meet customer expectations (Parasuraman et al., 1988). When the perceived service matches or even exceeds expectations (expected service), the service quality is perceived as good and satisfying (Madjowa et al., 2023).

In the realm of education, service is interpreted as an institution's effort to provide education that satisfies the community, with a marketing ethic that focuses on offering intellectual quality and the formation of citizen character (Inám & Hamdi, 2023). Pesantren, as an educational institution with a boarding school model in Indonesia, presents a holistic service (Rustandi & Ismawati, 2023). Pesantren has an important role in formal education, namely educating students academically (Fadhilah & Maunah, 2021). However, unlike public schools, pesantren also play a role in managing various programs outside the formal curriculum. The diversity of these programs inherently increases the demand for quality services from santri as learners who live and do full activities in a pesantren environment.

Pesantren services cover a broad spectrum, ranging from academic learning, moral development, to health and administrative services. Santris who stay in pesantren require comprehensive services, from waking up to going back to sleep. Therefore, before providing quality services, an in-depth analysis of service gaps is essential. To maximize service quality, educational institutions need to pay attention to the five main dimensions of service quality: tangibles (physical evidence), reliability, responsiveness, assurance, and empathy (Parasuraman et al., 1988). These dimensions are the foundation in understanding Voice of Customer (VoC) and measuring customer satisfaction in the pesantren environment.

2.2. ServQual (Service Quality)

ServQual is one of the leading methods for measuring service quality, especially in the academic context of educational institutions, to assess the adequacy of the services provided (Noya & Han's, 2023). Developed by Parasuraman et al. (1988), the ServQual model identifies the five key dimensions of service quality mentioned earlier. This method focuses on identifying and addressing the gap between customers' expectations and perceptions of service. This gap is calculated using the formula:

$$\text{Gap Score} = (\text{P}) \text{ Score} - (\text{E}) \text{ Score}$$

Description:

Gap = Gap

P = Perceived Service Score

E = Expected Service Score

The ServQual model is closely related to the concept of Voice of Customer (VoC), where customer satisfaction is at the core of VoC. Customer satisfaction is a response to the fulfillment of needs and expectations, which not only comes from fulfilling requests but also from the added value and anticipation of needs provided. In the world of education, the use of ServQual provides several significant benefits, including: increasing the satisfaction and loyalty of users of educational services, building brand awareness, and increasing the income of educational institutions (Inám & Hamdi, 2023). The ServQual method is used to find and address service gaps and can be the basis for formulating strategies and tactics to ensure the fulfillment of customer demands and expectations (Aurori & Putri, 2024). The application of ServQual in pesantren will help measure the extent to which existing services meet santri expectations and identify specific areas that require improvement.

2.3. QFD (Quality Function Deployment)

Quality Function Deployment (QFD) is a planning system designed to translate Voice of Customer (VoC) into quality characteristics of products, processes, and services, with the ultimate goal of achieving customer satisfaction. QFD is not only a qualitative tool, but also a crucial strategic planning tool (Marson & Sartor, 2019). This methodology allows organizations to systematically incorporate customer wishes from the early design stages, minimizing the risk of product or service mismatch with customer needs (Russell & Taylor, 2010).

QFD serves as a communication and planning tool that facilitates a deep understanding of customer demands, improves understanding of design interactions, and integrates operational processes into the design process. It supports institutions to make improvements that align with customer priorities, find innovative responses, and improve process effectiveness (Pratiwi, 2021). Noya and Han's (2023) stated that QFD is the best visualization technique for identifying true consumer desires and translating designs in response to those needs. In the context of pesantren, QFD will play a strategic role in translating the quality gaps identified by ServQual into concrete action plans that can be implemented to improve services.

2.4. Integration of ServQual and QFD in Service Quality Improvement

The combination of ServQual and QFD has proven effective in various sectors to comprehensively analyze and improve service quality. ServQual plays a role in identifying "what customers want" (VoC) and measuring the level of quality gaps. At the same time, QFD serves to translate these "wants" into "how to fulfill them" (hows) operationally. The integration of these two methods enables the identification of improvement priorities based on customer perceptions and then formulates specific and measurable improvement actions.

Several previous studies have successfully integrated ServQual and QFD for quality improvement, such as research conducted by Murgani & Hasibuan (2022) using this combination to improve the quality of logistics services by identifying attributes that have not met customer expectations. Moreover, Bilatula et al. (2023) applied these two methods in the health sector to identify service attributes that have an impact on patient satisfaction at health centers. In the same year, Gavahi et al. (2023) also utilized VoC in evaluating and improving the quality of services provided to radiology patients by combining ServQual and QFD. Moreover, still in the same year, Akhirullah et al. (2023) used these two methods to improve the quality of shoe stores. Similarly, in the education sector, research by Negoro et al. (2022) applied these two methods to identify service attributes that cause complaints from Sejahtera High School students in Surabaya.

Furthermore, research by Anggreani and Yafi (2023) applied these two methods to madrasah ibtidaiyah. Nonetheless, the literature still relatively limiteds the integrated application

of ServQual and QFD specifically in the context of pesantren educational institutions, especially to improve service quality for santri. This study aims to fill the gap by providing a systematic framework for service quality improvement in pesantren.

3. Research Methods

This research uses a mixed approach, integrating quantitative and qualitative methods to design service quality improvements at Pesantren XYZ. The research began with identification by directly observing what was needed in the field. Observations were carried out by brainstorming with resource persons from the management of Pesantren XYZ, who were chosen because they were considered to know and understand the service processes in the pesantren and had the capacity to provide information because they had been managing services in the pesantren for more than 10 years. Observations were made of the existing service processes in the XYZ Islamic Boarding School environment.

ServQual-based questionnaires were distributed to students who had studied at pesantren for at least three years with the aim that the data obtained could be more valid because these students had experienced the services at Pesantren XYZ for at least three years. The number of santri samples used as participants was 100 santri where according to experts, the appropriate survey participant size in a study is 30 people to 500 people. Validation of the questionnaire instrument is carried out through a validity test using the Pearson product moment formula, and the reliability test will use the Cronbach alpha formula on 30 initial respondents before distributing the main questionnaire, to ensure data accuracy and consistency.

The implementation of this research includes two stages, namely ServQual analysis and the formation of HoQ (House of Quality) with QFD (Quality Function Deployment). At the ServQual analysis stage, quantitative data from the questionnaire is processed to calculate the gap score between the expected and perceived service of students for each pesantren service attribute to identify critical areas that require improvement. Furthermore, in the HoQ formation stage with QFD, the results of the ServQual analysis in the form of service attribute gaps become the main input for QFD. This stage involved brainstorming sessions and intensive discussions with the management of Pesantren XYZ, especially the Head of R&D of Pesantren XYZ. The decision-making mechanism in this brainstorming discussion is based on consensus and priority weighting based on the relevance of service attributes, impact on student satisfaction, and feasibility of implementation. The planning matrix and technical matrix were compiled based on the Voice of Customer, which was translated into technical requirements. Furthermore, HoQ is built to map the relationship between the needs of students, technical responses, and the improvement priority matrix.

4. Results and Discussion

4.1. Demografi Partisipasi Participation Demographics

The questionnaire for students was distributed as many as 111 sheets, but from the results of sorting and filtering, 100 data were used for processing. The following are the demographics of the students who participated in this study:

Table.1. Demographics of Participation

Class	Number	Percentage
X IPA	20	20%
X IPA	5	5%
X Agama	5	5%
XI IPA	19	19%
XI IPS	8	8%
XI Agama	6	6%
XII IPA	30	30%
XII IPS	7	7%
Total	100	100%

4.2. ServQual Analysis

The service quality analysis in this study involved 100 students of Pesantren XYZ as respondents. Measurements were made based on the five dimensions of ServQual, which includes 19 service attributes: tangible (6 attributes), reliability (3 attributes), responsiveness (2 attributes), empathy (2 attributes), and assurance (6 attributes). The gap value is calculated as the difference between the perceived value (Perceived Service, P) and the expected value (Expected Service, E). The P and E values are obtained from the average total questionnaire score on each attribute. A negative gap indicates that the service received by students is below their expectations. A recapitulation of the expected and actual value data is presented in [Table 2](#).

Table.2. Gap of Service Quality Attributes of Pesantren XYZ

Dimension	Service Attributes	Reality	Expectations	Gap
TAN-01	Complete study room facilities (chairs, tables, projectors, whiteboards, etc.)	3,36	4,61	-1,25
TAN-02	Comfortable dormitory for rest	3,48	4,62	-1,14
TAN-03	There is a laboratory room with complete facilities	2,51	4,43	-1,92
TAN-04	Adequate dining room	3,74	4,4	-0,66
TAN-05	Availability of material books for classroom learning	3,79	4,51	-0,72
TAN-06	Alumni contribution to the development of pesantren	3,36	4,09	-0,73
REL-01	Teachers in class teach on time (arrival and return)	3,73	4,22	-0,49
REL-02	Musyrif accompanying halaqah on time (arrival and return)	4	4,21	-0,21
REL-03	The santri meal menu is delicious, hygienic, and nutritious	2,77	4,53	-1,76
RES-01	PJ Clinic is responsive to the health needs of students	3,26	4,41	-1,15
RES-02	The cleric is willing to help students who have problems	3,45	4,41	-0,96
EMP-01	There is assistance for students who cannot afford it (scholarships, etc.)	3,81	4,55	-0,74

Dimension	Service Attributes	Reality	Expectations	Gap
EMP-02	Students are fostered and educated regardless of status (no favoritism)	3,36	4,31	-0,95
ASR-01	Comfortable learning atmosphere	3,53	4,51	-0,98
ASR-02	Students have the opportunity to excel	3,55	4,59	-1,04
ASR-03	The pesantren environment is safely maintained (<i>security</i> on guard & active CCTV)	3,72	3,91	-0,19
ASR-04	Ustadz foster and educates students in a friendly and gentle manner	3,21	4,2	-0,99
ASR-05	Students gain organizational experience	3,65	4,45	-0,8
ASR-06	Students get learning outside the classroom (<i>outing class</i>)	2,53	4,42	-1,89

Source: Data processed (2024)

Furthermore, service quality per dimension is calculated by dividing the average value of reality (performance) by the average value of expectations (Quality = Reality / Expectations). Service quality is considered good if the value is more than one, indicating that the service received exceeds or is at least equivalent to expectations. The results of these calculations will produce the data in Table 3.

Table.3. Service Quality of Pesantren XYZ

No	Dimensions	Reality (Performance)	Expectations	Gap	Kualitas Layanan
1	Tangible	3,37	4,44	-1,07	0,76
2	Reliability	3,50	4,32	-0,82	0,81
3	Responsiveness	3,36	4,41	-1,06	0,76
4	Emphaty	3,59	4,43	-0,85	0,81
5	Assurance	3,37	4,35	-0,98	0,77
Average number		3,44	4,39	-0,95	0,78

Source: Data processed (2024)

The analysis results show that the service quality of Pesantren XYZ in all dimensions is still below number one, indicating a negative gap between the expectations and reality felt by students. The tangible dimension has a service quality value of 0.76, so it cannot be said to be good. The reliability dimension has a service quality value of 0.81, so it cannot be said to be good. The responsiveness dimension has a service quality value of 0.76, so it cannot be said to be good. The empathy dimension has a service quality value of 0.81, so it can be said to be not good. The assurance dimension has a service quality value of 0.77, so it can be said to be not good.

Overall, Pesantren XYZ's average service quality is 0.78, confirming that the services provided currently do not meet students' expectations. This finding is consistent with the ServQual literature, which states that a negative gap indicates the need for improvement intervention (Parasuraman et al., 1988). The practical implication is that Pesantren XYZ must immediately focus on improving services in all five dimensions to increase student satisfaction and maintain competitiveness as a boarding education institution.

4.3. QFD (Quality Function Deployment) Implementation

This research continues with the implementation of QFD, starting with the determination of customer needs (WHATs) and technical responses (HOWs) to address the service quality gaps identified by ServQual.

4.3.1. Determination of Customer Needs (WHATs) and Technical Responses (HOWs)

Customer needs (WHATs) are explicitly translated from the service attributes evaluated in ServQual, which reflect students' expectations of service quality. These needs are presented in Table 4.

Table.4. Customer Needs (WHATs) of Pesantren XYZ

No	Customer Needs
1	Complete study room facilities (chairs, tables, projectors, whiteboards, etc.)
2	Comfortable dormitory for rest
3	Laboratory space available with complete facilities
4	Adequate dining room
5	Availability of material books for classroom learning
6	Alumni contribution to the development of pesantren
7	Teachers in the classroom teach on time (arrival and return)
8	Musyrif assisted halaqah on time (arrival and return)
9	Students' meals are delicious, hygienic, and nutritious.
10	PJ Klinik pesantren is responsive to the health needs of the students
11	Ustadz is willing to help students who have problems
12	Assistance for students who cannot afford it (scholarships, etc.)
13	Santri are fostered and educated regardless of status (no favoritism)
14	Comfortable learning atmosphere
15	Students have the opportunity to excel
16	The pesantren environment is maintained safely (security on guard & active CCTV)
17	Ustadz foster and educates students in a friendly and gentle manner
18	Students get organizational experience
19	Students get learning outside the classroom (an outing class)

Source: Data processed (2024).

Furthermore, technical responses (HOWs), which are internal actions of Pesantren XYZ to fulfill the WHATs, are determined. The process of determining these HOWs was carried out through intensive discussions and brainstorming with internal parties of Pesantren XYZ, especially the Head of R&D, who has a deep understanding of the operations and dynamics of Pesantren. This discussion ensured that the HOWs formulated were relevant, realistic, and implementable. The resulting technical responses are presented in Table 5.

Table.5. Technical Response (HOWs) Based on Customer Needs of Pesantren XYZ

No	Customer Needs	Technical Response
1.	Complete study room facilities (chairs, tables, projectors, whiteboards, etc.)	Gradual procurement of learning facilities
2.	Comfortable dormitories for rest	Ensure dormitory facilities and conditions are in good condition

No	Customer Needs	Technical Response
3.	Available laboratory space with complete facilities	Procurement of laboratory facilities that meet national education standards
4.	Adequate dining room	Expansion of the student dining room
5.	Availability of material books for classroom learning	Ensure learning material books are available
6.	Alumni contribution to pesantren development	Increase the fraternal activities of Pesantren XYZ alumni
7.	Teachers in the classroom teach on time (arrival and return)	Special briefing for teachers regarding discipline and responsibility
8.	Musyrif assisted the halaqah on time (arrival and return)	Special briefing for musyriks regarding discipline and responsibility
9.	Students' meals are delicious, hygienic and nutritious	Evaluation of the kitchen by the General Department
10.	PJ Klinik pesantren is responsive to the health needs of students	The Dormitory Head ensures that the PJ Clinic is active in responding to students
11.	Ustadz is willing to help students who have problems	<i>Training and coaching</i> educators to be dexterous in serving
12.	Assistance for students who cannot afford it (scholarships, etc.)	The counseling team adds relationships and information related to scholarships
13.	Students are coached and educated regardless of status (no favoritism)	<i>Training and coaching of</i> educators regarding how to behave
14.	Comfortable learning atmosphere	Ensuring classroom facilities and conditions are in good condition
15.	Students have the opportunity to excel	PJ Binpres increases the socialization and networking of santri talents
16.	The pesantren environment is maintained safely (<i>security</i> on guard & active CCTV)	<i>Upgrading for security and maintenance of</i> CCTV facilities
17.	Ustadz foster and educates students in a friendly and gentle manner	<i>Training and coaching of</i> educators related to adab in educating
18.	Students gain organizational experience	Expanding the scope of extracurricular clubs
19.	Students get learning outside the classroom (<i>outing class</i>)	The curriculum department designs more scheduled <i>outing-class</i> activities

Source: Data processed (2024).

4.3.2. Establishment of House of Quality (HoQ)

After the WHATs and HOWs are defined, the next step is to build a HoQ (House of Quality). This process includes several stages, namely: the formation of a relationship matrix, correlation matrix, planning matrix and technical matrix.

4.3.2.1. Relationship Matrix

The relationship matrix is created to determine how strong the relationship is between consumer needs (WHATs) and technical responses (HOWs) to the needs that have been compiled. This assessment is qualitative and quantitative, using a numerical scale determined through expert consensus from internal parties of Pesantren XYZ. This assessment is also strengthened by reference to previous QFD case studies in the context of educational services. Validation of this

assessment is done through joint review between researchers and internal pesantren stakeholders to ensure accuracy and objectivity. This matrix visually maps how much a technical response contributes to meeting customer needs. The matrix can be seen in Table 6, with number codes based on Table 4 and Table 5.

Table.6. Relationship Matrix between Santri Needs (WHATs) and Technical Response (HOWs)

WHATs / HOWs		001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019
001	Complete study room facilities (chairs, tables, projectors, whiteboards, etc.)	○		□											□					
002	Comfortable dormitory for rest		○																	
003	Available laboratory space with complete facilities	□		○																
004	Adequate dining room				○															
005	Availability of material books for class learning	□				○									△					
006	Alumni contribution to the development of pesantren						○													
007	Teachers in class teach on time (arrival and return)							○				□		□				□		
008	Musyif accompanying halaqah on time (arrival and return)								○			□		□				□		
009	Students' meals are delicious, hygienic, and nutritious.									○										
010	PJ The pesantren clinic is responsive to the health needs of the students.										○	□		□				□		
011	Ustadz is willing to help students who have problems.											○		□				□		
012	There is assistance for students who cannot afford it (scholarships, etc.)												○							
013	Santri are fostered and educated regardless of status (no favoritism)											□		○				□		
014	Comfortable learning atmosphere	□													○					
015	Students have the opportunity to excel.															○				
016	The pesantren environment is securely maintained (security on guard & CCTV active)																○			
017	Ustadz fosters and educates students in a friendly and embracing manner.											□		□				○		
018	Students gain organizational experience.																		○	
019	Students get learning outside the classroom (outing class)																			

Description:

- <empty> : 0 (No relationship)
 △ : 1 (There may be a relationship)
 □ : 3 (Moderate relationship)
 ○ : 9 (Strong relationship)

4.3.2.2. Correlation Matrix

Relationships between technical responses (HOWs) are mapped to identify positive synergies or negative conflicts between actions. This is important to optimize the implementation strategy and avoid unintended problems.

Table.7. Correlation Matrix between Technical Responses (*HOWs*)

WHATs / HOWs	001	002	003	004	005	006	007	008	009	010	011	012	013	014	015	016	017	018	019
001 Gradual procurement of learning facilities	○		○											□					
002 Ensure dormitory facilities and conditions are in good condition.		○																	
003 Procurement of laboratory facilities that meet national education standards	□		○																
004 Expansion of space for students	□			○															
005 Ensuring learning material books are available	□				○									□					
006 Increase the fraternity activities of XYZ pesantren alums.						○													
007 Special briefing for teachers regarding discipline and responsibility							○				□		□				□		
008 Special influence for musyrif regarding discipline and responsibility								○			□		□				□		
009 Evaluation of the kitchen by the general department									○										
010 The dormitory head ensures the clinic PJ is active in responding.										○	□		□				□		
011 Training and coaching of educators to be dexterous in providing services											○		□				□		
012 Counseling team to increase relationships and information related to scholarships												○							
013 Training and coaching educators on how to behave											□		○				□		
014 Ensuring classroom facilities and conditions are in good condition	□													○					
015 PJ binpres to increase the socialization and networking of santri talents.															○				
016 Upgrading for security and maintenance of CCTV facilities																○			
017 Training and coaching of educators related to adab in educating											□		□				○		
018 Expanding the scope of extracurricular clubs																		○	
019 The curriculum department designs more scheduled outing-class activities.																			○

Description:

- : (9) Strong positive influence
- : (3) Moderately strong positive influence
- <empty> : No influence
- △ : (-3) Moderately strong negative influence
- ▽ : (-9) Strong negative influence

4.3.2.3. Planning Matrix

This matrix integrates the level of importance given by students in the ServQual survey, the current level of customer satisfaction (customer satisfaction performance), setting targets (goals), and calculating the improvement ratio. The improvement ratio value is calculated as a comparison between the goal and the reality value (performance) perceived by customers (Improvement ratio = Goal / Reality). This figure indicates how much improvement is needed to meet the expectations of students. The results of the improvement ratio calculation are presented in Table 8.

Table.8. Improvement Ratio of Service Quality of Pesantren XYZ

No	Service Attributes	Goal	Reality	Improvement Ratio
1.	Complete study room facilities (chairs, tables, projectors, whiteboards, etc.)	4,61	3,36	1,37
2.	Comfortable dormitory for resting	4,62	3,48	1,33
3.	Laboratory space is available with complete facilities	4,43	2,51	1,76
4.	Adequate dining room	4,4	3,74	1,18
5.	Availability of material books for classroom learning	4,51	3,79	1,19
6.	Alumni contribution to the development of pesantren	4,09	3,36	1,22
7.	Teachers in class teach on time (arrival and return)	4,22	3,73	1,13
8.	Musyrif assisted the halaqah on time (arrival and return)	4,21	4	1,05
9.	The santri's meal menu is delicious, hygienic, and nutritious	4,53	2,77	1,64
10.	PJ The pesantren clinic is responsive to the health needs of students	4,41	3,26	1,35
11.	Ustadz is willing to help students who have problems	4,41	3,45	1,28
12.	There is assistance for students who cannot afford it (scholarships, etc.)	4,55	3,81	1,19
13.	Santri are fostered and educated regardless of status (no favoritism)	4,31	3,36	1,28
14.	Comfortable learning atmosphere	4,51	3,53	1,28
15.	Students have the opportunity to excel	4,59	3,55	1,29
16.	The pesantren environment is safely maintained (security on guard & active CCTV)	3,91	3,72	1,05
17.	Ustadz fosters and educates students in a friendly and gentle manner.	4,2	3,21	1,31
18.	Students get organizational experience	4,45	3,65	1,22
19.	Students get learning outside the classroom (outing class)	4,42	2,53	1,75

Source: Data processed (2024)

4.3.2.4. Technical Matrix

This matrix produces absolute importance and relative importance values for each technical response. The priority of the technical response is determined based on the highest relative importance value. This provides a clear picture of which technical measures have the most impact and should be implemented first. The priority order of the service attributes is presented in Table 9.

Table.9. Technical Response Prioritization

No	Technical Response	Relative Importance	Priority Order
1	Gradual procurement of learning facilities	8,19%	4
2	Ensuring dormitory facilities and conditions are in good condition	4,11%	7
3	Procurement of laboratory facilities that meet national education standards	5,25%	6
4	Expansion of the student dining room	3,91%	14
5	Ensuring learning material books are available	4,01%	11
6	Increasing fraternity activities of XYZ Islamic Boarding School alumni	3,64%	17
7	Special briefings for teachers regarding discipline and responsibility	3,75%	15
8	Special briefing for musyrif related to discipline and responsibility	3,74%	16
9	Evaluation of the kitchen by the General Department	4,03%	10
10	The Dormitory Head ensures that PJ Clinic is active in responding to students	3,92%	13
11	Training and coaching of educators to be dexterous in serving students.	10,45%	1
12	The counseling team adds contacts and information related to scholarships	4,04%	9
13	Training and coaching for educators on how to behave	10,22%	2
14	Ensure class facilities and conditions are in good condition	5,79%	5
15	PJ Binpres increases the socialization and networking of santri talents	4,08%	8
16	Upgrading for security and maintenance of CCTV facilities	3,48%	19
17	Training and coaching of educators related to adab in educating	9,95%	3
18	Expanding the scope of extracurricular clubs	3,96%	12
19	The curriculum department designed more scheduled <i>outing-class</i> activities	3,49%	18

Source: Data processed (2024).

After analyzing the combination of ServQual and QFD methods, Table 10 presents an overview of the ranking or priority order of the attributes of each category.

Table.10. Overview of Priority Order of Improvement

Dimension	Santri Needs	Technical Response	Rank Gap	Rank Imp.	Rank IR	AI Rank	Rank %RI
TAN-01	Complete study room facilities	Gradual procurement of learning facilities	4	2	4	4	4
TAN-02	Comfortable dormitories for rest	Ensure dormitory facilities and conditions are in good condition	6	1	6	7	7
TAN-03	Laboratory space is available with complete facilities	Procurement of laboratory facilities that meet national education standards	1	9	1	6	6
TAN-04	Adequate dining room	Expansion of student dining room	16	12	16	14	14
TAN-05	Availability of learning material books in class	Ensure learning material books are available	15	6	15	11	11
TAN-06	Alumni contribution to pesantren development	Increase alum fraternity activities	14	17	13	17	17
REL-01	Teachers in class teaching on time (arrival and return)	Special briefing for teachers on discipline and responsibility	17	14	17	15	15
REL-02	Musyrief accompanying halaqah on time (arrival and return)	Special briefing for musyriefs regarding discipline and responsibility	18	15	18	16	16
REL-03	Student meals are delicious, hygienic, nutritious	Evaluation of the kitchen by Bag. General	3	5	3	10	10
RES-01	PJ pesantren Klinik is responsive to students' health needs	The Dormitory Head ensures that the PJ Clinic is active in responding to students	5	11	5	13	13
RES-02	Ustadz is willing to help students who have problems	Training and coaching of educators to be dexterous in service	10	11	10	1	1

EMP-01	Assistance for students who cannot afford it (scholarships, etc.)	The counseling team increases relationships and information related to scholarships	13	4	14	9	9
EMP-02	Santri are nurtured and educated regardless of status (no favoritism)	Training and coaching educators on how to behave	11	13	9	2	2
ASR-01	Comfortable learning atmosphere	Ensure classroom facilities and conditions are in good condition	9	7	11	5	5
ASR-02	Santri has the opportunity to excel	PJ Binpres to increase the socialization and networking of santri talents	7	3	8	8	8
ASR-03	The pesantren environment is securely maintained (security on guard & CCTV active)	Upgrading for security and maintenance of CCTV facilities	19	18	19	19	19
ASR-04	Ustadz foster and educates students in a friendly and gentle manner	Training and coaching of educators regarding adab in educating	8	16	7	3	3
ASR-05	Students gain organizational experience	Expanding the scope of extracurricular clubs	12	8	12	12	12
ASR-06	Santri gets learning outside the classroom (outing class)	The curriculum department designs more scheduled outing-class activities	2	10	2	18	18

Source: Data processed (2024).

Description of Table 10:

Rank Gap : Highest Gap
 AI Rank : Absolute Importance
 Rank Imp. : Level of need of students
 Rank % RI : Relative Importance
 Rank IR : Improvement Rasio

	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19			
Service Attributes																				Percieved	Goal	Improvement Ratio
TAN-01	○													□						3,36	4,61	1,37
TAN-02	□	○																		3,48	4,62	1,33
TAN-03			○																	2,51	4,43	1,76
TAN-04	□			○																3,74	4,40	1,18
TAN-05					○									△						3,79	4,51	1,19
TAN-06						○														3,36	4,09	1,22
REL-01							○				□		□				□			3,73	4,22	1,13
REL-02								○			□		□				□			4,00	4,21	1,05
REL-03									○											2,77	4,53	1,64
RES-01										○	□		□				□			3,26	4,41	1,35
RES-02											○		□				□			3,45	4,41	1,28
EMP-01												○								3,81	4,55	1,19
EMP-02											□		○				□			3,36	4,31	1,28
ASR-01	□													○						3,53	4,51	1,28
ASR-02															○					3,55	4,59	1,29
ASR-03																○				3,72	3,91	1,05
ASR-04											□		□				○			3,21	4,20	1,31
ASR-05																		○		3,65	4,45	1,22
ASR-06																		○		2,53	4,42	1,75
Rank	2	1	0	12	6	17	14	15	5	11	11	4	13	7	3	18	16	8	10			

4.4. Proposed Improvements to the Quality of Service of Pesantren XYZ Based on the Analysis Results

Based on a comprehensive interpretation of the results of the ServQual and QFD analysis, the following are suggestions for improving the quality of service of Pesantren XYZ in each dimension:

1. Tangible Dimension (Physical Evidence): The attribute "Comfortable dormitory for rest" has the highest level of importance for students and shows a significant gap. This implies that the physical condition of the dormitory, such as cleanliness, facilities, and comfort, greatly affects the perception of service quality. The practical implication is that Pesantren XYZ needs to ensure regular monitoring of dormitory conditions and facilities, as well as improve rapid response to repair needs. Theoretically, this supports the importance of physical aspects in shaping service quality perceptions (Parasuraman et al., 1988). In addition, the attribute "Laboratory rooms with complete facilities are available" has the highest overall gap and the highest improvement ratio, making it a top priority. Therefore, the gradual procurement of facilities is a crucial technical solution that impacts the three main attributes in the tangible dimension, including study room facilities. This shows that investment in adequate physical infrastructure has a domino effect on student satisfaction.
2. Reliability dimension: The attribute "Students' meals are delicious, hygienic, and nutritious" is the attribute with the highest importance and the largest gap in this dimension, as well as the third highest improvement ratio of all attributes. This indicates that food quality issues are a significant factor affecting the reliability of pesantren services. Suggestions for improvement focused on the evaluation of the kitchen by the General Department and active coordination with the committee and representatives of the guardians to formulate a better food menu strategy. These findings emphasize the importance of consistency and quality in core services such as food provision, which is a basic expectation of santri and a key element of the reliability dimension.

3. Responsiveness dimension: The attribute "PJ Klinik pesantren is responsive to the health needs of students" has a significant gap, in line with the urgency of rapid response in health services. The proposed improvement is intensive monitoring by the Head of Dormitory to ensure that the PJ Clinic is active and proactive in responding to the medical needs of students. This is also in line with the principle of responsiveness in ServQual, which emphasizes readiness and speed of service. Although the attribute "Ustadz is willing to help students who have problems" has a lower gap, QFD analysis shows that technical responses related to this attribute, namely "Training and coaching of educators to be dexterous in serving," "Training and coaching of educators regarding how to behave," and "Training and coaching of educators regarding adab in educating," have the highest absolute importance and relative importance values. This means that improving educators' competencies and attitudes collectively will be very effective in improving overall service responsiveness, where several attributes can be improved at once. This suggests there are strong theoretical implications for how improvements to internal capabilities can broadly influence perceptions of service quality and is in line with [Bintank and Maunah \(2022\)](#), that an excellent education system, supported by competent educators, will significantly increase the contribution to learner development.
4. Empathy dimension: The attribute "There is assistance for students who cannot afford it (scholarships, etc.)" is the fourth most important attribute overall, indicating the high expectations of students for financial support. Suggestions for improvement are the expansion of the Counseling Guidance (BK) team's relationship with other scholarship provider institutions (other than BAZNAS) or CSR programs of large companies. This reflects an understanding of the individual needs of students, which is the essence of the empathy dimension of ([Parasuraman et al.,1988](#)). The practical implication is that pesantren need to be more proactive in seeking and facilitating santri's access to external assistance.
5. Assurance dimension: The attribute "Santri have the opportunity to excel" has a high level of importance and a significant gap. This shows that students want more opportunities to develop their potential and achieve achievements. Proposed improvements include more intensive socialization of competitions and the creation of a talent screening program through extracurricular clubs. This not only increases opportunities for achievement but also builds santri's trust in the pesantren's commitment to developing their potential, which is the core of the assurance dimension. In addition, the attribute "Santri get learning outside the classroom (outing-class)" has the second highest gap overall. The suggestion for improvement is the design of more scheduled outing-class activities by the curriculum department. This will provide a more varied learning experience and strengthen santri perceptions of the quality of educational assurance provided by pesantren.

5. Conclusion

This study analyzed the quality of service at Pesantren XYZ using the ServQual and QFD methods. The results of the ServQual analysis show that the overall service quality of Pesantren XYZ is still not good, with all 19 service attributes showing negative gap values. This indicates that the santri's perception of the services received is below their expectations. Through the integration of ServQual and QFD, this study succeeded in compiling a HoQ (House of Quality) of Pesantren XYZ services. This HoQ serves as a strategic guideline for pesantren management in identifying and prioritizing service improvement areas. Based on the HoQ analysis, specific

improvement recommendations have been formulated for each dimension of service quality (tangibles, reliability, responsiveness, empathy, and assurance), focusing on attributes that have the highest level of importance and urgency of improvement for students. Theoretically, this study contributes to the quality management literature by showing the implementation of the integration of ServQual and QFD methods in the context of designing service quality improvements in pesantren educational institutions. This approach can be a reference for future research that examines service quality improvement in the education sector, especially pesantren, or with similar methods.

Practically, the results of this study provide concrete guidance for the management of Pesantren XYZ to increase organizational value through improved service quality. Recommendations that focus on the prioritization of students allow Pesantren to allocate resources effectively, for example, in the procurement of crucial phased facilities, improving the quality of meal menus, and strengthening staff responsiveness and empathy. This prioritization of improvements is especially important given the limited resources. For continuous improvement, it is recommended that Pesantren routinely conduct structured service performance measurement. Future research can consider the use or combination of other methods, such as fishbone diagrams, IPA, refined Kano, and others, to get a more comprehensive understanding and proposals for quality improvement, especially for Pesantren educational institutions.

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