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Strategic enhancement of Zakat collection and distribution in philanthropic institutions: integration of SERVQUAL, Kano, and QFD
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Strategic enhancement of Zakat collection and distribution in philanthropic institutions: integration of SERVQUAL, Kano, and QFD

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Abstract: Zakat philanthropic institutions have a pivotal role in fund collection and distribution, yet they haven't realized their full potential primarily due to diminished public trust. Addressing this challenge requires strategies to elevate service quality. This study introduces an integrated method combining SERVQUAL, Kano, and Quality Function Deployment (QFD) to optimize Zakat service quality. Out of twenty-one service attributes evaluated, fourteen were identified as pivotal for strategic enhancement, spanning areas like information management, human resources, and product diversification. Utilizing the QFD framework, these attributes were transformed into actionable quality improvement measures. The suggestions for quality improvement measures include refining website functionalities, ensuring consistent and engaging information dissemination, comprehensive employee training, introducing e-wallet options, and expanding student loan provisions. By integrating SERVQUAL, Kano, and QFD, this research offers a holistic assessment approach, emphasizing only those service aspects that truly resonate with donor satisfaction. The findings and recommendations present immediate actionable insights for institutions aiming to augment zakat collection and distribution efficacy.

1 Introduction

Philanthropic institutions are institutions that do not seek profit in the implementation of their programs. Establishing a philanthropic institution aims to enhance beneficiaries' long-term and sustainable welfare. This indicates that the implementation of the channelled program is not limited to satisfying momentary requirements but also includes those that are advantageous for life. In Islam, charitable giving takes the form of Zakat, Infaq, Sadaqah, and Waqf (ZISWAF) [1]. A zakat institution is one type of philanthropic organization.

Zakat is an asset that must be spent by a Muslim or business entity of 2.5% if the assets owned are equal to or greater than 85 grams of gold (nisab) in 1 year and be given to people who are entitled to receive zakat in Islam or called mustahik [2]. People who can pay zakat are called muzakki, and people who collect and distribute it are called Amil. Infaq is a person's sincere gift in the form of material that can be given to anyone, whether in need or not. Sadaqah is a gift given sincerely in material and non-material goods, such as smiling to fellow Muslims and doing good to others. Meanwhile, waqf is a type of gift in the form of goods that cannot be inherited and is maintained so that its value does not decrease and the benefits can continue to be given for the public interest [3].

Indonesia has tremendous potential for collecting zakat. The results of a study by the Badan Amil Zakat Nasional (Baznas) Center for Strategic Studies in 2021 the realization of the collection of zakat funds reached 14.1 trillion from the projected achievable zakat potential of 327 trillion. This amount is not optimal because only about 4.28 percent of the projected potential for zakat has been realized [4].

The cause of the non-optimal realization of zakat fund collection is partly due to the low public trust in zakat institutions. This causes some people to prefer to give their zakat directly to mustahik, so it is not documented. Thus, the biggest challenge for institutions to increase ZISWAF fund collection is encouraging muzakki to pay ZISWAF through existing institutions [5]. This challenge requires creating innovative and creative programs and improving the quality of services, including logistics of ZISWAF distribution to show the best conditions. This condition can attract and give confidence to muzakki to channel their funds even more.

Baitul Maal of Universitas Islam Bandung (BMU), one of the philanthropy institutions that collects ZISWAF funds and social funds to be distributed for the educational needs of Universitas Islam Bandung (UNISBA) students. BMU experienced difficulties in increasing the collection of ZISWAF funds from internal UNISBA, namely lecturers, education staff, and new student infaq, as well as external, namely corporate sponsors, alums, and individuals [6]. Although BMU has distributed around 90% of its funds for student scholarships, the percentage of

students receiving scholarships is still relatively low due to the limited funds raised.

To increase the amount of ZISWAF funds received by BMU, it is important to improve service quality by creating innovative donation distribution programs and improving services according to donor needs to maintain donor loyalty to donate and increase the trust of prospective donors to entrust their ZISWAF funds to BMU. This statement is by several previous studies which say that, if the services provided are of high quality, of course, muzakki will feel satisfied and encourage them to maintain their loyalty and trust to channel their zakat through the institution [7] and can attract more muzakki to donate to a zakat institution [8].

Based on the description above, the purpose of this research is to identify service attributes that need to be improved using the SERVQUAL and Kano methods and design service quality improvements based on service quality dimensions using the Quality Function Deployment method in order to enhance service quality and sustainably increase the amount of funds raised and distributed by BMU.

Several studies have been conducted to enhance service quality in different sectors of service-oriented organizations, including hospitality [9], libraries [10], aircraft MRO [11], health services [12], universities [13], and banking [14]. These studies have employed a range of methods, such as the application of Kano and QFD techniques. A study was conducted to investigate the enhancement of service quality in entrepreneurial education service startup enterprises using the integration of SERVQUAL, Kano, and QFD methodologies [15]. The findings of the research demonstrate the potential avenues for holistic enhancement. Previous studies undertaken at zakat institutions have utilized the Structural Equation Model (SEM) methodology to propose a conceptual framework to enhance the quality of services these organizations provide [8]. However, this research did not thoroughly define the specific consumer needs.

The novelty of this research is to adopt an integrated approach by combining the SERVQUAL, Kano, and QFD methods at zakat philanthropic institutions. This method is a comprehensive solution to improve service quality and zakat collection by prioritizing donor needs and expectations as a basis for service development. This research emphasizes donor experiences and perceptions, which have not been thoroughly studied in this context. In addition, the study offers valuable recommendations and integrates the findings into operational measures that zakat charity organizations can implement. This shows that this study provides solutions that can be applied in the field in addition to its analysis.

2 Methodology

2.1 Research variables

This research uses a quantitative approach because it uses variables as the research object. The variables were derived from classifying donors' needs and wants, obtained through interviews with 10 donors who donated more funds than others. The results of the interviews were then analyzed by categorizing them based on the dimensions of service quality, which represent all aspects of a service, including the physical form and process of receiving services. The service quality variables in this study are as follows [16]:

1) Tangibles focuses on the physical aspects of a service, such as facilities and employee appearance.
2) Reliability is the ability of a company to deliver the promised service accurately and without error.
3) Responsiveness, willingness to help, and immediate response to customer requests and questions.
4) Assurance, providing customer trust and security based on employee knowledge and courtesy.
5) Empathy and willingness to understand customer problems and provide attention and care.
6) Knowledge, where the company provides information and data to generate interest in the product and facilitate decision-making [17].

Respondents were selected using purposive sampling, namely lecturers and education personnel who know BMU services. The number of samples was 79 people based on the Slovin formula.

2.2 Stages of integration 3 methods

Service quality improvement in this research will use 3 integrated methods. These methods include:

(1) SERVQUAL

The SERVQUAL method is used to maximize customer satisfaction based on identifying the gap analysis between customer expectations and perceptions of service quality [18]. The advantages of this SERVQUAL method are that it can assess the performance of a service attribute and help identify company weaknesses and strengths [19].

(2) Kano

The Kano method allows us to prioritize service quality attributes by categorizing customer needs in detail based on their influence on customer satisfaction [20]. Kano employs a model that helps classify needs and comprehend customer characteristics into six categories, including the Attractive category, which includes service attributes that customers do not expressly expect but, when met, result in high customer satisfaction. The One Dimensional category comprises attributes that, when fulfilled, lead to maximum customer satisfaction, whereas their absence causes dissatisfaction. On the other hand, must-be attributes may not directly affect satisfaction when fulfilled, but their absence greatly dissatisfies customers. Questionable attributes arise when customers are uncertain about the impact of a particular service attribute on their satisfaction. Reverse attributes yield satisfaction when not provided, but their provision decreases satisfaction. Lastly, Indifferent attributes have no significant influence on customer

satisfaction, regardless of their presence or absence [10]. The advantages of the Kano categorization are used as a consideration for strategy development and creating value to meet customer satisfaction [21].

(3) Quality Function Deployment (QFD)

QFD is a method for structuring the design and improvement of products or services by translating the wants and needs of consumers (voice of customer) and conducting systematic assessments in technical responses using the House of Quality matrix [22]. The advantages of this method can be used to improve service quality by ensuring that service quality development meets customer needs [11]. The QFD stages in a service can be done with only 3 stages, namely technical requirements with the help of the house of quality, process requirements, and quality procedures [23]. The technical requirement is a stage to translate the quality characteristics customers desire for a product or service into technical characteristics or company policies. Process requirements are a description of the process needs that need to be carried out by the company in answering consumer needs contained in the attributes of technical requirements/company policies. In contrast, the quality procedure is a technical step in the service provided in detail through the description of the company in answering the needs and desires of consumers contained in the process requirements.

(4) The integration of 3 methods

Integrating the Kano and SERVQUAL methods addresses their weaknesses and provides a comprehensive assessment of service quality attributes for management improvements [24]. The Kano method addresses the SERVQUAL method's limitations in linear perception and lack of innovation tools, while the SERVQUAL method complements the Kano method by offering quantitative values for service attributes. However, these methods lack systematic and operational tools for improvement efforts, necessitating integration with the QFD method. By integrating SERVQUAL, Kano, and QFD methods, a thorough analysis of service quality attributes can be conducted, leading to opportunities for improvement [15]. This integration also aids companies in identifying service quality attributes that maximize customer satisfaction, avoid developing unnecessary attributes [9] and effectively manage customer feedback [25]. Therefore, this research aims to utilize the integrated approach of SERVQUAL, Kano, and QFD methods.

The research focuses on identifying service attributes that need improvement based on their impact on donor satisfaction and designing quality procedures for improving the service quality of the zakat institution. The following steps are involved in this process:

1. Determining closed questionnaire questions by modifying the questions from indicators related to the variables determined through a review of previous research literature [12-14,23,26-28]. The questionnaire uses Likert and Kano scales to measure the gap between customer expectations and perceptions of service quality. Another questionnaire was developed to compare the perceived service quality between BMU and its competitors.
2. Testing the validity and reliability of the questionnaire.
3. Analyzing the questionnaire responses using the SERVQUAL and Kano methods to identify the gaps between customers' perceptions and expectations. Service attributes with negative gaps in the SERVQUAL method and classified as One-dimensional Must Be, or Attractive in the Kano method are identified as areas requiring improvement.
4. Using these identified service attributes as customer requirements or the "Whats" matrix in the House of Quality.
5. Creating the planning matrix or Part B, which involves calculating customer and competitive satisfaction performance values from the closed-ended questionnaire, determining goals and improvement ratios, conducting interviews with Baitul Maal UNISBA, and calculating adjustment importance values using satisfaction scores from SERVQUAL multiplied by the weight values of the Kano categories.
6. Developing the technical requirements or Part C by interviewing Baitul Maal UNISBA to determine the technical responses or characteristics of the institution.
7. Constructing Part D of the matrix by assessing the strength of the technical requirements' relationships with the voice of the customer using symbols (●) for strong relationships (value 9), (o) for moderate relationships (value 3), and (Δ) for weak relationships (value 1). The direction of the relationship development is also determined.
8. Creating Part E of the matrix by assigning correlation values to the technical responses, indicating the impact of one technical response on another using symbols (√√→) for a strong positive influence, (√→) for a moderate positive influence, (<blank>) for no influence, (x←) for a moderate negative influence, and (xx→) for a strong negative influence.
9. Developing Part F of the matrix by calculating the weight priorities, determining the technical benchmark and own performance, and establishing target improvement values for the technical requirements.
10. Defining the process requirements by discussing with the distribution and marketing team of BMU and determining the relationships and weight priorities for the process requirements.
11. Quality procedures are designed based on the company's responses to customer needs and desires. These procedures are developed through discussions with the distribution and marketing team of BMU,

observations of other institutions, and literature studies.

Matrix A, or the customer needs (Whats) matrix, contains service attributes identified as having negative gap values and falling into the One dimensional, Must Be, and or Attractive categories. Meanwhile, matrix C or the technical requirements matrix contains steps to improve the technical requirements of the company to respond to the needs and desires of consumers contained in matrix A. These technical requirements were obtained based on discussions with the BMU marketing and logistic departments, searching the website, and conducting literature studies. Meanwhile, the process requirements and quality procedures attributes are a form of description of the steps to improve the technical requirements of the company contained in matrix C. Thus, the relationship between matrices A and C in QFD is very close because both complement each other in designing quality services and fulfilling customer needs and wants.

3 Result and discussion

Based on the interviews and observations, 21 attributes of consumer needs and desires for service quality of zakat institutions were obtained, and then the attributes were grouped based on service quality dimensions and knowledge variables. The attributes that have been grouped are used to determine the closed questionnaire questions by finding indicators through the previous research literature, resulting in 21 valid and reliable closed questionnaire questions. The questionnaire questions are shown in Table 1.

Table 1 Research variable identification

Identification of Research Variables	Indicators	Questionnaire Question
Tangible	Availability of Waiting Room and Availability of Garbage Bins	Baitul Maal UNISBA has a spacious service room with waiting chairs.
		Baitul Maal UNISBA keeps its premises clean and has rubbish bins
	The existence of communication media in the service	Baitul Maal UNISBA has media to convey information on institutional activities, fund distribution programs, and the latest news (Websites, Bulletin, and social media).
		Baitul Maal UNISBA has customer service contacts such as live chat via phone, WhatsApp, and email to facilitate communication
	Having service products that fulfill consumer needs	Baitul Maal UNISBA has a variety of service products or donation distribution programs that can meet the needs of recipients of its services and attract donors' desire to donate, such as (Scholarship Funds, Interest-free Long-Term and Short-Term Loans, Foster Parents, Revolving Waqf Funds, Business Assistance, Assistance Funds for Village Services).
	Completeness of features on the *website*	Donors with an account on the Baitul Maal UNISBA website can see a special report of the amount of funds donors give along with the time.
Reliability	Companies provide other efforts or ways of service so that consumers do not spend much effort	Baitul Maal UNISBA provides services for ease of donation such as through payroll, interbank transfers, and e-wallets such as Dana, go pay, ovo, and payment through QR scans
	The information provided is accurate	Baitul Maal UNISBA provides information updates regarding the funds received for each ZISWAF product offered through social media websites, for the wider community.
		Baitul Maal UNISBA provides information to the public regarding the financial statements of collection and distribution through its website, and social media per month/quarter/semester/year.
	There are quick transaction status notifications and transaction reminder	Baitul Maal UNISBA provides reports on funds that have been given by donors personally via WhatsApp and email
		Baitul Maal UNISBA provides proof of transaction to donors within a maximum of 1x24 hours for donation payments that have entered the institution.
	There are quick transaction status notifications and transaction reminder	Baitul Maal UNISBA provides information on invitations to donate to institutional activities periodically through pamphlets/banners, social media, websites.

Responsiveness	Delivering what customers ask for in a timely	Baitul Maal UNISBA employees are responsive in providing answers to questions related to service programs and procedures both offline and online within 1x24 hours.
Assurance	Employee attitudes, words, and actions provide credibility	Baitul Maal UNISBA employees provide friendly and professional services that increase trust and desire to donate.

Table 1 Research variable identification

Identification of Research Variables	Indicators	Questionnaire Question
Assurance	Equal service regardless of age and position and provide a good response in receiving criticism suggestions	Baitul Maal UNISBA employees accept responses to criticism and suggestions well and do not look at the age and position of the person speaking.
	Employees can maintain the confidentiality of data	Baitul Maal UNISBA employees can maintain the personal data information of donors who do not want their names published in public reports
Empathy	Employees provide solutions or answers and appointment flexibility	Baitul Maal UNISBA employees can provide advice on service products that are by the ability/desire of donors.
		Baitul Maal UNISBA employees have flexible and free time to conduct cooperation and provide services.
Knowledge	Knowledge of the benefits of a product, and Knowledge of the system used in the product	Baitul Maal UNISBA provided knowledge about the basis and benefits of ZISWAF.
		Baitul Maal UNISBA provides information on the invitation to the ZISWAF program and knowledge of its benefits or basis in Islam on pamphlets/banners, websites, and social media.
		Baitul Maal UNISBA has a feature to calculate various types of zakat on the website.

The results of distributing closed questionnaires with a Likert scale will be processed using the SERVQUAL method which aims to determine the *gap* or gap between perceptions and expectations on service quality attributes provided by BMU at this time. The description of the *gap* calculation for attribute T1, namely "Baitul Maal UNISBA has a spacious service room and is equipped with waiting chairs" is explained in the calculation below:

1. Determining the mean value of perception $\bar{P}$ (1)and the average value of expectations $\bar{E}$ for each variable (2)

$$\bar{P} = \frac{\sum_{i=1}^{n} p_1}{n} \quad (1)$$

$$\bar{P} = \frac{178}{79} = 2.253$$

Description:
P_1 = The perception value given by the respondent for question 1.
n = Number of Respondents.

$$\bar{E} = \frac{\sum_{i=1}^{n} E_1}{n} \quad (2)$$

$$\bar{E} = \frac{260}{79} = 3{,}291$$

Description:
E_1 = Expected value given by the respondent for question 1.

2. Calculating SERVQUAL *score* results (for each variable) (3).

$$S = \bar{P} - \bar{E} \quad (3)$$

$$S = 2.253 - 3.291 = -1.038$$

Description:
S = SERVQUAL *Score.*
$\bar{P}$ = Average value of perception.
$\bar{E}$ = Average expected value.

3. Calculating the *satisfaction score* (4)

$$\textit{Satisfaction Score} = \textit{Gap} \times \text{Importance} \quad (4)$$
$$= -1.038 \times 1 = -1.038$$

Based on the above calculations of all attributes, 18 attributes have negative gap values and negative satisfaction scores, indicating that donors have high expectations for these service attributes but are currently dissatisfied with their quality. These attributes require improvements to meet donor expectations. On the other

hand, 5 attributes show positive gap values and satisfaction scores, indicating that the quality of these service attributes has already met donor expectations and provides satisfaction. These attributes only need to be maintained.

The service attributes with negative gap values highlight areas where BMU can improve, such as implementing a donation receipt reporting system, providing detailed and periodic information, offering adequate facilities, enhancing services, and increasing donor interest. Among these attributes, the one with the highest negative gap value is "Baitul Maal UNISBA provides proof of transaction to donors within 24 hours for donation payments received by the institution." This attribute indicates that BMU currently fails to provide transaction proof promptly, which negatively impacts donor satisfaction, especially for those who make donations during incidental times, or donors who make donations through payroll.

The next step is data processing with the Kano method, which aims to ensure that attributes with negative gaps need improvement. Using the Kano evaluation table, this method begins with classifying the answers to questions as *functional* and *dis-functional*. This evaluation table is used to classify respondents' answers into six categories: Questionable, *Indifferent*, *Reverse*, *Attractive*, *and One-Dimensional*. The classification results are analyzed using the *if-then* method based on the Blauths formula to get a broader view. Example calculation for the Blauths formula on the first attribute (5), (6):

$$\text{The value of} = \textbf{"}\textbf{\textit{one-dimensional}}\textbf{"} + \textbf{"}\textbf{\textit{attractive}}\textbf{"} + \textbf{"}\textbf{\textit{must be}}\textbf{"} \quad (5)$$
$$= 1 + 1 + 36 = 38$$

$$\text{The value of} = \textbf{"}\textbf{\textit{indifferent}}\textbf{"} + \textbf{"}\textbf{\textit{reverse}}\textbf{"} + \textbf{"}\textbf{\textit{questionable}}\textbf{"} \quad (6)$$
$$= 41 + 0 + 0 = 41$$

Because the value of ("one-dimensional" + "attractive" + "must be") < ("indifferent" + "reverse" + "questionable"). So, the category chosen is based on the maximum value of "indifferent", "reverse", or "questionable", so the category for attribute 1 is indifferent.

Based on the classification results with the Kano evaluation table and analysis using the Blauths formula, the "must be" category includes 10 fundamental attributes and must be fulfilled by BMU to avoid donor disappointment. If the service attributes are fulfilled, it will not increase donor satisfaction, because these attributes are basic and should be owned. These attributes pertain to communication media, service facilities, how service is delivered, and responsible management of donations such as open and detailed management of donations to the public.

The "one-dimensional" category consists of 3 attributes with a linear relationship with donor satisfaction. Fulfilling these attributes, such as providing a special report on the number of funds that donors have given because it is a form of responsibility for managing funds to donors, having a variety of service products because the distribution of funds utilized is one of the factors to make donors trust and be interested in donating, and providing proof/notification of transactions for donation payments because it is a form of responsiveness and responsibility for the funds given by donors. Failure to fulfil these attributes leads to donor disappointment.

The following classified category is the *attractive* category, which is a category that is not required to be fulfilled, but if given, it can increase satisfaction for donors because the provision of this service is more than what customers expect. If the attribute is not fulfilled, it will not cause a decrease in satisfaction levels. Attributes that fall into the *attractive* category if implemented are an effort to develop an innovation process to excel in competition. Attributes that fall into this category are related to providing knowledge for donors to increase interest in donating and responsiveness and innovation in the service process to provide high satisfaction.

Lastly, the "indifferent" category comprises 4 attributes that have no significant impact on donor satisfaction, in other words, respondents do not care about these attributes. Examples of attributes that fall into this category are not the main aspects that donors pay attention to, because some donors communicate only through *chat* without coming to the BMU office, so the service room, written suggestion box, and timely service according to donors' perceptions are not too important.

Understanding the classification of attributes based on these categories helps BMU prioritize its efforts for improvement. By focusing on fulfilling the "must be" and "one-dimensional" attributes, BMU can address the most critical areas to enhance donor satisfaction. Additionally, considering the "attractive" attributes can further elevate donor experience and satisfaction. Attributes falling into the "indifferent" category can be deprioritized as they have minimal influence on donor satisfaction.

The results of the calculation *gap value* and classification of the Kano category are adjusted by selecting service attributes with a negative *gap* value. They are included in the *must-be*, *one-dimensional*, and or *attractive categories* so that institutions can determine which service attributes need to be improved immediately. Not only that, but adjustments are also made by calculating the *Adjusted Importance* value, which is used as the value of the importance level of the attribute to be correlated with the *technical requirements* in the preparation of the *House of Quality*. The *Adjusted Importance* (AI) value is obtained in the following way (7), (8):

$$\textbf{\textit{Adjusting Importance}} = \textbf{\textit{Customer Satisfaction Score}} \times \textbf{Kano Model Value} \quad \textbf{(7)}$$

Description:

***Customer Satisfaction Score* (CSS) = *Gap* x Importance Level (8)**

The value of the canoe model is obtained if the attributes show categories:
Indifferent = 0, *Must be* = 0.5, *One Dimensional* = 1 and *Attractive* = 1.5

An example of a description of the calculation of the *Adjustance Importance* value for the 4th attribute because it has a negative *gap* value and has a *must-be* category:
Adjustance Importance for 4th Attribute = -9.367 x 0.5 = -4.684.

The Adjustance Importance value used is the absolute value without using the notation (-) minus.

Integrating the Kano and SERVQUAL methods identified four attributes with a negative gap value that fall into the indifferent category, indicating that improving these attributes would not significantly impact customer satisfaction. Similarly, attributes with a positive gap value in the must-be and attractive categories do not require improvement as customer expectations have already been met, so these service attributes only need to be maintained as the institution's strength. Therefore, the improvement focuses on attributes with negative gap values in the must-be, one-dimensional, and attractive categories as shown in Table 2.

Table 2 Attributes that need improvement

Customer Needs
Having media to convey information on institutional activities, fund distribution programs, and the latest news such as on (Website, Bulletin, and social media)
Having a variety of service products or donation distribution programs that can meet the needs of service recipients and attract donors' desire to donate, such as (Scholarship Funds, Long-Term Loan Funds, Interest-Free Short-Term Loan Funds, Foster Parents Funds, Revolving Waqf Funds, Business Assistance Fund, Assistance Fund for Village Devotion)
Donors who have an account on the website can see a special report of the amount of funds donors have given along with the time.
Provides services for easy donation through payroll, interbank transfers, and e-wallets such as Dana, Gopay, Ovo and payment through QR scans.
Provide updated information regarding the funds received for each ZISWAF product offered through social media and the website for the wider community.
Provide reports on funds given by donors personally via WhatsApp and email.
Provide information to the public/community regarding the financial statements of collection and distribution through the website and social media per month/quarter/semester/year.
Provide proof of transaction to donors within 1x24 hours to pay donations that have entered the institution.
Provide information on invitations to donate to institutional activities periodically through pamphlets/banners, social media, and websites.
Employees are responsive in answering questions related to service programs and procedures offline and online within 1x24 hours.
Employees can provide advice on service products that are by the capabilities/desires of donors.
ZISWAF institutions provide knowledge about the basis and benefits of ZISWAF.
Baitul Maal UNISBA provides information on the invitation to the ZISWAF program and knowledge about the benefits or basis in Islam on pamphlets/banners, websites, and social media.
Baitul Maal UNISBA has a feature to calculate various types of zakat on the website.

These 14 attributes are used as input in the House of Quality matrix, specifically in the "Whats" matrix or voice of the customer. The institution responds to these attributes by formulating technical requirements, resulting in seven technical requirements or matrix C attributes. The priority weights for these technical requirements are calculated by multiplying the adjustment importance value with the strength of the relationship between the voice of the customer and the technical requirement. A description of *technical requirements is* shown in Table 3.

The three technical requirement attributes with the highest priority weights are "Optimization of information media," "Education for donors," and "Development of website facilities." Currently, the institution has various information media platforms like Instagram, Facebook, WhatsApp, and a website, but they are not being utilized optimally. For example, financial statement information is not regularly updated on the website, and there is a lack of routine and scheduled information provision on Instagram and Facebook. It is necessary to optimize the use of information media, because the existence of an information media platform can reach potential donors broader and faster, can build awareness of potential donors regarding the institution's mission and the logistical processes involved in collecting and distributing *zakat* funds, demonstrate transparency in fund management,

rebranding, increase knowledge sharing. This will contribute to the competitiveness and sustainability of the institution in a highly competitive landscape.

Table 3 Technical requirement

No	*Technical Requirement*
1	Optimization of information media
2	Development of service products/fund distribution programs
3	Development of website facilities
4	Response speed
5	Quality of human resources
6	Completeness of service facilities
7	Education for donors

In the second phase of the analysis, the technical requirements obtained from the previous phase are translated into process requirements that address consumer needs and desires. Through discussions with BMU's distribution and marketing department, 7 technical requirement attributes were translated into 6 process requirement attributes. 2 technical requirement attributes were responded to 1 *process requirement* attribute, namely the optimization of information and education media for donors into 1 process requirement attribute, namely the presentation of educational information, consistent, transparent and always updated. The focus was on the three process requirements with the highest priority weights.

The priority weights for process requirements were calculated by multiplying the priority value of the technical requirement with the strength of the relationship between the technical requirement and the process requirement. The greater the relationship strength, the greater the process requirement's priority weight. The process requirement with the highest priority is "Presentation of educational, consistent, transparent, and always updated information." This can be accomplished by updating the website's content frequently and establishing a regular schedule for content distribution on social media platforms. The second-highest priority weight is "Addition of donation activity history and zakat calculation features to the website." This proposed new feature for BMU aims to provide a tool for calculating different types of zakat and enable donors to observe their personal donation history. These characteristics can increase donor confidence and decrease zakat calculation confusion. The third highest priority weight is for "Using a virtual assistant chat system to assist with response management." This proposed feature is novel for BMU, enabling quick responses to donor queries. Using a virtual assistant chat system to promptly resolve donor questions and provide transaction proofs, donation reminders, and timely online assistance within 24 hours is required to implement this process requirement. These findings provide BMU with valuable insights into the areas that require improvement and innovation to meet donor expectations better and enhance donor satisfaction.

The priority weight in the process requirement matrix is then used to determine the priority weight for the relationship between process requirements and quality procedures so that it can translate the company's answer to consumer needs contained in process requirements in the form of quality procedures in improving service quality. The description of the quality procedures is shown in Table 4.

Table 4 Description of quality procedures

Quality Procedures	Reference
Implementation of live chat features using a virtual assistant chatbot based on the WhatsApp application using an extreme programming method	[29]
Development of web features with the programming language used is PHP, and using the database used MYSQL and using an online system.	[30]
Provision of reminders to make donations through broadcast messages on WhatsApp personally every month	[31]
Organize training on how to communicate and serve donors and information systems every 6 months	[32]
Development of a fund distribution program focusing more on student activities by providing incidental student loan and business assistance funds for students.	Observation of Student Needs
Provide an Autoreply system after donors deposit their funds via WhatsApp / Email. For those who make payments via transfer, the maximum delivery is within 2 hours after paying, while for those who make payments via payroll, proof of transactions will be sent within a month.	Observation of other ZISWAF Institution
Provides information in the form of fund distribution reports, fund-collecting reports, ZISWAF knowledge, Naqvi arguments, hadiths, and so on, and general information constantly planned daily and accompanied by images or video.	Observation of other ZISWAF Institution
Creation of an e-wallet to facilitate payments	
Evaluate the functionality of the application and ensure there are no bugs	[33]

Strategic enhancement of Zakat collection and distribution in philanthropic institutions: integration of SERVQUAL, Kano, and QFD

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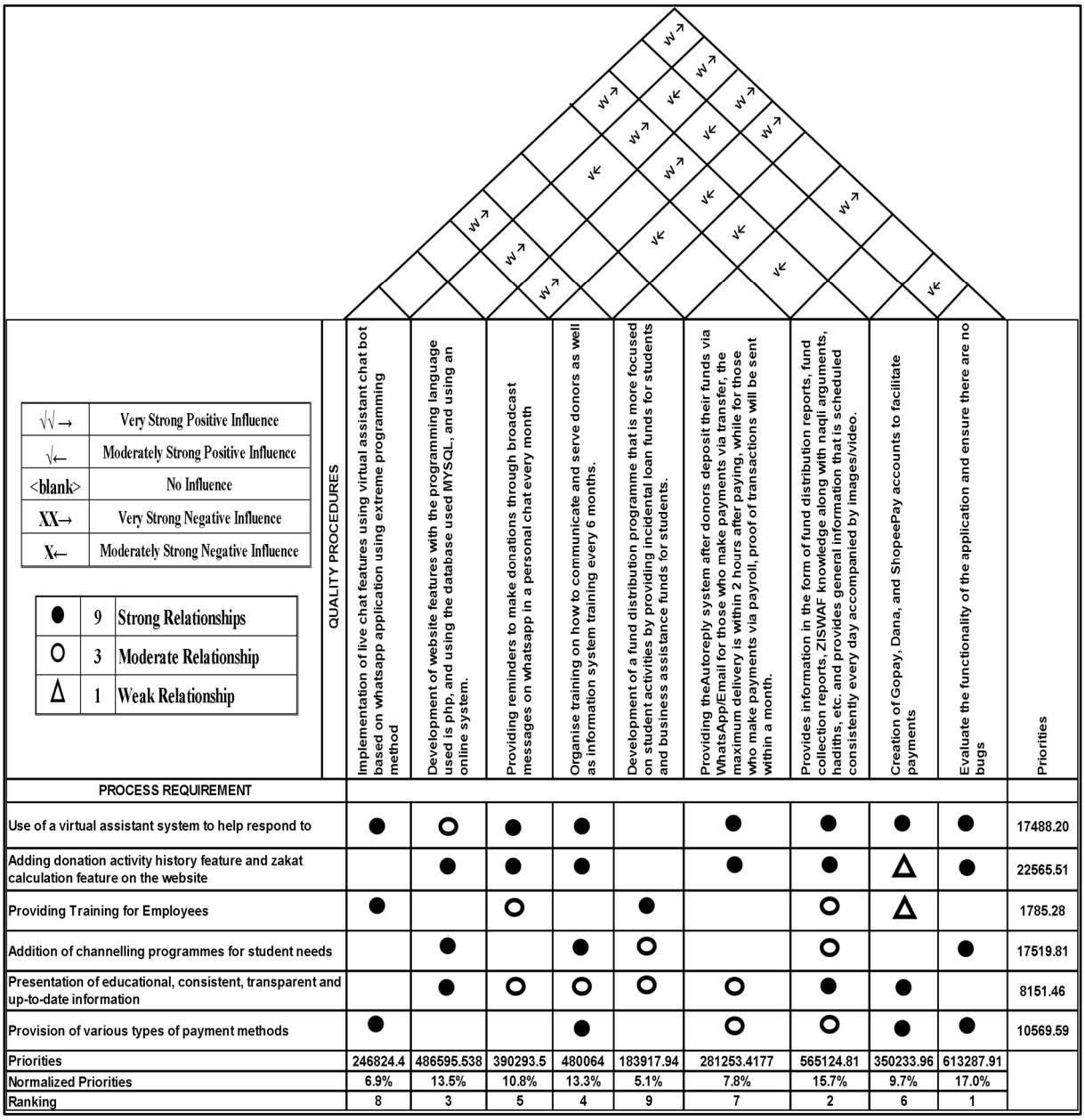
A total of 6 process requirement attributes are translated into 9 quality procedures. The translation is based on discussions with BMU's distribution and marketing department, observations of other institutions, and literature studies. One process requirement attribute is translated into 3 quality procedures, considering both customer and company voices. The use of a virtual assistant system to assist in responding to user feedback results in the implementation of three quality procedures: the application of a live chat feature using a WhatsApp-based virtual assistant chatbot using extreme programming methodology, the provision of reminders, and the implementation of an autoreply system after depositing funds. BMU's main focus is planning improvements based on the three highest priority weights of the process requirements. Figure 1 shows the quality procedure matrix.



√√→	Very Strong Positive Influence
√←	Moderately Strong Positive Influence
<blank>	No Influence
XX→	Very Strong Negative Influence
X←	Moderately Strong Negative Influence

●	9	Strong Relationships
O	3	Moderate Relationship
Δ	1	Weak Relationship

QUALITY PROCEDURES	Implementation of live chat features using virtual assistant chat bot based on whatsapp application using extreme programming method	Development of website features with the programming language used is php, and using the database used MYSQL, and using an online system.	Providing reminders to make donations through broadcast messages on whatsapp in a personal chat every month	Organise training on how to communicate and serve donors as well as information system training every 6 months.	Development of a fund distribution programme that is more focused on student activities by providing incidental loan funds for students and business assistance funds for students.	Providing theAutoreply system after donors deposit their funds via WhatsApp/Email for those who make payments via transfer, the maximum delivery is within 2 hours after paying, while for those who make payments via payroll, proof of transactions will be sent within a month.	Provides information in the form of fund distribution reports, fund collection reports, ZISWAF knowledge along with naqil arguments, hadiths, etc. and provides general information that is scheduled consistently every day accompanied by images/video.	Creation of Gopay, Dana, and ShopeePay accounts to facilitate payments	Evaluate the functionality of the application and ensure there are no bugs	Priorities
PROCESS REQUIREMENT										
Use of a virtual assistant system to help respond to	●	O	●	●		●	●	●	●	17488.20
Adding donation activity history feature and zakat calculation feature on the website		●	●	●		●	●	Δ	●	22565.51
Providing Training for Employees	●		O		●		O	Δ		1785.28
Addition of channelling programmes for student needs		●		●	O		O		●	17519.81
Presentation of educational, consistent, transparent and up-to-date information		●	O	O	O	O	●	●		8151.46
Provision of various types of payment methods	●			●		O	O	●	●	10569.59
Priorities	246824.4	486595.538	390293.5	480064	183917.94	281253.4177	565124.81	350233.96	613287.91	
Normalized Priorities	6.9%	13.5%	10.8%	13.3%	5.1%	7.8%	15.7%	9.7%	17.0%	
Ranking	8	3	5	4	9	7	2	6	1	

Figure 1 Quality procedure matrix

The priority weights of the quality procedures are obtained by multiplying the priority value of the process requirement with the relationship value between the process requirement and the quality procedures. The higher the relationship strength, the greater the priority weight of the process requirement. The highest priority is the quality procedure: "Evaluating application functions and ensuring there are no bugs." This involves evaluating the website's and other applications' functionality and conducting monthly maintenance to ensure there are no bugs or errors

in specific processes, ensuring the smooth operation of the offered features.

The second highest priority is the quality procedure: "Providing information in the form of fund distribution reports, fund collection reports, knowledge about ZISWAF, including scriptural evidence, hadith, etc., and providing scheduled general information with consistent daily updates accompanied by images/videos." Sharing information on social media platforms follows written Standard Operating Procedures (SOPs), including the content or information to be conveyed, upload timing, layout design, colour selection, and choice of media for information dissemination. Providing knowledge about ZISWAF can increase the interest of donors and potential donors in contributing their ZISWAF funds, as understanding the benefits of donating to those in need motivates people to donate more.

The third highest priority weight is given to the quality procedure: "Developing website features using PHP programming language, utilizing MySQL database, and implementing an online system." The proposed features include calculating zakat obligations for wealth and income and providing personal activity history reports of donated funds. Additionally, a feature to view financial reports within a specific time frame that can be accessed publicly. These website enhancements can be achieved by developing the website using the PHP programming language, which is open-source and freely available, and utilizing the Sublime Text 3 software for seamless integration between the interface and database. The MySQL database is chosen for its ease of use, security features, and compatibility with open-source systems. The online implementation allows administrators to make changes anytime and anywhere.

4 Conclusions

Using the Kano and SERVQUAL methods, the study's findings indicate that 14 of the 21 BMU service attributes are below donor expectations. These attributes encompass three primary areas:

1. Information Management: Enhancements in website features, fund distribution updates, payment notifications, and insightful donation-related content.
2. Service Product Development: Introduction of diverse donation payment methods and development of new donation distribution programs.
3. Human Resource Management: Fostering responsiveness and customized service suggestions among BMU employees.

We derived 7 technical requirements from these service attributes, further distilled into 6 process requirements and 9 quality procedure attributes. Implementing these procedures can bridge the identified service gaps, enhancing BMU's quality of services and donor trust. Features like an autoreply to system, live chat integration, application function evaluation, and human resource improvements are crucial.

The collection and distribution of zakat can be optimized more efficiently by enhancing website features and presenting consistent, engaging content. Incorporating an electronic wallet account is an innovative solution, facilitating both the collection and distribution of zakat. Indeed, e-wallets could represent a novel and efficient method for these processes. Furthermore, consistent training of staff and employees is paramount. Such training endeavours help enhance their skills and knowledge, ensuring the zakat distribution process runs smoothly and effectively. With the diversification of service offerings, we can increase accessibility for beneficiaries, further refining the zakat distribution efficacy. Ultimately, these enhancements work in tandem to optimize the distribution of zakat, aiming for precision and effectiveness that uplifts the community welfare.

This research uniquely integrates the SERVQUAL, Kano, and QFD approaches. Consequently, BMU has a strategic framework to boost service quality, tackling the prevalent challenge of low public trust. By emphasizing service quality aligned with donor expectations, institutions can elevate zakat collection, benefiting mustahik and paving the path for sustainable growth.

For future research, exploring practical applications to assess service modifications' efficacy and drawing comparisons with other philanthropic entities would be beneficial. The potential of emerging technologies, especially online platforms, in enhancing donor engagement deserves further exploration.

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