

Analysis the Level of Passenger Satisfaction with Community Services at Terminal Type A Purabaya using Service Quality Methods

Vanesha N.M Simanjuntak^{1*}, Dira Ernawati²

^{1,2}Universitas Pembangunan Nasional "Veteran" Jawa Timur
22032010103@student.upnjatim.ac.id^{1*}, dira.ti@upnjatim.ac.id²

Abstract

Terminal Tipe A Purabaya is an institution providing various types of land transportation services under the Ministry of Transportation. The main issue faced by the Type A Purabaya Terminal lies in improving the quality of public service to meet expectations and enhance passenger satisfaction. The Service Quality (Servqual) method is employed, with validity and reliability testing conducted using SPSS software. Data analysis reveals a gap between the actual performance experienced by passengers and their expectations regarding services at the Type A Purabaya Terminal. Based on the calculations, it can be concluded that there is a discrepancy between service expectations and the actual performance at the terminal. The analysis identifies nine attributes with negative gap values, indicating that the services received by passengers remain unsatisfactory. The attributes requiring improvement include bus departure and arrival schedules, staff knowledge of routes and schedules, the accuracy of information provided by staff, facilities for the elderly and disabled, as well as various other aspects related to comfort, safety, and cleanliness of the facilities. Through the Service Quality analysis, the Type A Purabaya Terminal can prioritize service attributes that need enhancement and design effective improvement strategies. This will ensure continuous service improvements aligned with passenger expectations.

Keywords: Gap, Public Service, Satisfaction Level, Service Quality, Terminal Tipe A Purabaya.

1. Introduction

Currently, transportation is a fundamental need for humans to support mobility. Reliable modes of transportation are needed to meet community expectations. Public transportation plays an important role in urban and rural areas, so facilities and infrastructure that are safe, comfortable, organized, and efficient are needed for the smooth running of daily activities. Public satisfaction surveys are an important step to measure the quality of public services and set priorities for improvement.

This study aims to measure passenger satisfaction with services at Purabaya Type A Terminal and provide recommendations for improvement. The research focuses on 10 service attributes, with data collected through questionnaires from 100 respondents. The results are expected to be the basis of evaluation to improve the effectiveness, efficiency, comfort, and safety of services at the terminal.

To overcome service problems at the Purabaya Type A Terminal, the Service Quality (Servqual) method was used. This method is superior because it is able to identify user expectations and satisfaction levels through analyzing the gap value (service quality score) of each attribute. Data validity and reliability were tested using SPSS software, so that the analysis results were accurate and in line with field conditions. Service quality is measured by the difference between perceived reality and customer expectations. With Servqual, Purabaya Type A Terminal can understand passenger needs and analyze the causes of dissatisfaction [1].

This study aims to measure passenger satisfaction with services at Purabaya Type A Terminal and provide suggestions for improving service quality based on the attributes studied. The analysis was conducted using the Service Quality (Servqual) method, with validity and reliability tested using SPSS software to ensure accurate results. This method helps understand passenger needs, identify causes of dissatisfaction, and prioritize service improvements. With this analysis, Purabaya Type A Terminal can design effective improvement strategies, improve service quality according to passenger expectations, and support sustainable service development.

2. Theoretical Foundation

2.1. Public Service

Public service is inclusive of all organizations involved in providing services to the public, at least some of which charge money for use in paying taxes. Public service organizations include government agencies, non-profit organizations and private companies that provide services. The six key dimensions of quality developed in healthy service relationships provide a good starting point for incorporating consumer willingness. It is stated that services must be Appropriate and, Available and accessible, Equitable, Acceptable, Economic and efficient, Effective. Service Satisfaction is the result of public opinion or assessment of the performance of services to be provided by the apparatus of public service providers [2].

2.2. Community Satisfaction Survey

Community Satisfaction Survey (SKM) is data and information about the level of community satisfaction obtained from the results of quantitative measurements of people's opinions in obtaining services from the apparatus of public service providers by comparing their expectations and needs. The community satisfaction survey (SKM) according to Permenpan RB No. 14 of 2017 is a comprehensive measurement activity on the level of community satisfaction with the quality of services provided by public service providers where the measurement targets include: structuring systems, mechanisms and service procedures [3].

2.3. Service Quality

Service Quality or Servqual is one method to measure service quality using a questionnaire. The Servqual questionnaire can be changed and adjusted to suit different companies/services. The Servqual method is a method for measuring the quality of a service or service from the attributes of each dimension, so that a gap value will be obtained, where this value is the difference between the respondent's expectations of the service and the respondent's reality of the service received. The Servqual method is based on a multi-item scale that measures customer perceptions and expectations and the gap between the two based on 5 dimensions of quality namely reliability, physical evidence, certainty, empathy, and responsiveness. . The use of this method allows companies to improve quality, increase customer satisfaction and increase competitiveness [4].

2.4. Basis for Service Quality Assessment

Service Quality has 5 aspects as the basis for its assessment as described by Parasuraman in the journal. Service Quality is expressed by five dimensions, namely tangible, reliability, responsiveness, assurance, and empathy[5]:

1. Tangibles : Tangibles is an aspect of service that includes the completeness and comfort of the facilities owned by the company, such as equipment and buildings provided. Customer assessment depends on whether these facilities are adequate and in accordance with service needs.
2. Reliability : The company's ability to provide services to customers reflects the extent to which they have met the set standards.
3. Responsiveness : Responsiveness is a reaction in the form of action provided by the company in serving customers. This includes the responsiveness and speed of employees in responding and taking action to meet customer needs.
4. Assurance : Assurance is a form of company responsibility for services that include promises made to overcome problems with their facilities or services. It can also be in the form of additional services offered as an effort to increase customer interest, such as insurance or warranty.
5. Empathy : Empathy is a form of service that is shown through good attitudes and behavior to customers, so that they feel comfortable and satisfied. Empathy includes the company's ability to understand customer needs and problems, act in their interests, provide personalized attention, and provide services with appropriate and convenient operating hours for customers.

2.5. Validity Test and Reliability Test

Validity is a test to explain how well the data collected from research instruments. Validity can be done with several types, namely construct validity, content validity and criterion related validity. The validity test was carried out statistically using Pearson product moment. The Pearson product moment (r) validity test compares each dependent variable with the 2D motion capture analysis (identified as the reference standard). Higher correlations indicate strong concurrent validity. Reliability is a test to measure the extent to which the instrument provides stable and consistent results. This test is important because it refers to the consistency of the entire instrument. Reliability measurement can be done in two ways, namely questions are asked repeatedly at different times to see if the answers remain consistent and the second way some questions are asked once but the results are compared with the answers to other questions. Reliability testing using the Cronbach Alpha test is carried out for instruments that have more than 1 correct answer, such as essay-shaped instruments, questionnaires, or questionnaires [6], [7].

3. Research Methods

3.1. Data Collection Stage

Data collection is a technique or method used to collect data to be studied. Data collection was carried out using the questionnaire distribution method aimed at respondents, namely passengers of the Purabaya Type A Terminal. This method aims to obtain quantitative data that can be systematically analyzed using the Servqual method. The following service quality attributes are used as benchmarks to determine service quality problems at the Purabaya Type A Terminal:

Table 1: Service Quality Attributes

Dimensions	Attributes	
Tangibles	A ₁	The physical facilities at Purabaya Type A Terminal (waiting room, toilets, parking area) are clean and well-maintained.
	A ₂	Directions, information boards and timetable screens are clear and easy to read.
Reliability	B ₁	Vehicle departure and arrival schedules are always on time.
	B ₂	The Purabaya Type A Terminal staff provide accurate and precise information.
Responsiveness	C ₁	The quick response of Purabaya Type A Terminal staff in providing services and assistance to the public.
	C ₂	Complaints or grievances submitted by the public at Purabaya Type A Terminal will be responded to and processed quickly.
Assurance	D ₁	Officers' knowledge of bus routes and schedules is very good and can provide clear information to the public.
	D ₂	Safety and comfort of passengers while at Purabaya Type A Terminal
Empathy	E ₁	Purabaya Type A Terminal provides facilities that support special needs, such as the elderly or people with disabilities.
	E ₂	Officers provide attention and friendly service to all passengers/community.

3.2. Data Processing Stage

Broadly speaking, this research consists of two stages, the initial stage and the data analysis stage. The initial stage is the stage of making questionnaires and collecting data. While the data analysis stage includes gap analysis. This research methodology is carried out with literature studies, field surveys and field studies followed by problem formulation, determining research objectives, identifying Service Quality attributes, designing questionnaires, then proceeding with the data collection stage by distributing questionnaires to passengers at the Purabaya Type A Terminal and then drawing samples, and continuing with testing using the Validity Test and Reliability Test methods and data processing using the Service Quality method stages.

At the stage of making the questionnaire, indicators of the five dimensions of service quality (servqual) in public services at the Purabaya Type A Terminal were determined. The indicators of each variable are compiled to compare Real Performance with Expectations based on Level of Importance, with a measurement scale of

- 1 = Very Inadequate
- 2 = Not Adequate
- 3 = Adequate
- 4 = Adequate
- 5 = Very Adequate

Furthermore, data collection was carried out using the survey method to 100 passengers in the waiting room area of the Purabaya Type A Terminal. The variables measured to determine the quality of service at the Purabaya Type A Terminal using the servqual method are:

1. Independent Variables (X_n):
 - tangibles (X₁),
 - reliability (X₂),
 - responsiveness (X₃),
 - assurance (X₄),
 - empathy (X₅).
2. Dependent variable (Y): passenger satisfaction with public services at Purabaya Type A Terminal

The description of each of these variables is as follows:

- a. Tangibles or physical evidence, namely the ability a company in showing existence to external parties.
- b. Reliability, or reliability, namely the ability company to provide services as promised accurately and reliably. reliable.
- c. Responsiveness, or responsiveness, namely a willingness to help and provide fast service (responsive) and precise to customers, with clear information delivery.
- d. Assurance, or guarantee and certainty, namely knowledge, politeness, and ability of company employees to foster customer trust to the company.
- e. Empathy, which is giving attention that is sincere and individualized or personal attention that is given to customers by trying to understand consumer desires.

At the data processing stage, the level of customer satisfaction using the Gap range. Gap is a function of the difference between perceived performance and expectations. So that the measurement of satisfaction is done by comparing the values of variables that affect the level of perception of the reality felt by passengers of a service quality compared to customer expectations. compared to the expectations of passengers at Tpa A Purabaya Terminal.

4. Results and Discussion

4.1. Validity Test

Validity testing on all questionnaire results (performance and expectations) was carried out with the help of SPSS software with 100 respondents, then $df = 100 - 2 = 98$; $\alpha = 5\%$, then r table is 0.196. The criteria for a data can be declared valid if ($r_{count} \geq r_{table}$).

Correlations

		A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	Total
A1	Pearson Correlation	1	.235*	.099	.157	.304**	.187	.142	.346**	.201*	.225*	.589**
	Sig. (2-tailed)		.019	.329	.119	.002	.063	.160	<.001	.045	.025	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
A2	Pearson Correlation	.235*	1	.079	.147	.229*	.086	.218*	.152	.195	.177	.487**
	Sig. (2-tailed)	.019		.432	.144	.022	.393	.029	.131	.052	.078	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
B1	Pearson Correlation	.099	.079	1	.082	.018	.074	.205*	.108	.213*	.109	.389**
	Sig. (2-tailed)	.329	.432		.418	.858	.466	.041	.286	.033	.281	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
B2	Pearson Correlation	.157	.147	.082	1	.253*	.165	.235*	.279**	.300**	.146	.513**
	Sig. (2-tailed)	.119	.144	.418		.011	.101	.019	.005	.002	.148	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
C1	Pearson Correlation	.304**	.229*	.018	.253*	1	.227*	.255*	.144	.241*	.125	.531**
	Sig. (2-tailed)	.002	.022	.858	.011		.023	.010	.153	.016	.217	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
C2	Pearson Correlation	.187	.086	.074	.165	.227*	1	.217*	.426**	.172	.117	.513**
	Sig. (2-tailed)	.063	.393	.466	.101	.023		.030	<.001	.088	.245	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
D1	Pearson Correlation	.142	.218*	.205*	.235*	.255*	.217*	1	.220*	.338**	.111	.560**
	Sig. (2-tailed)	.160	.029	.041	.019	.010	.030		.028	<.001	.271	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
D2	Pearson Correlation	.346**	.152	.108	.279**	.144	.426**	.220*	1	.147	.214*	.594**
	Sig. (2-tailed)	<.001	.131	.286	.005	.153	<.001	.028		.145	.032	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
E1	Pearson Correlation	.201*	.195	.213*	.300**	.241*	.172	.338**	.147	1	.202*	.569**
	Sig. (2-tailed)	.045	.052	.033	.002	.016	.088	<.001	.145		.044	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
E2	Pearson Correlation	.225*	.177	.109	.146	.125	.117	.111	.214*	.202*	1	.449**
	Sig. (2-tailed)	.025	.078	.281	.148	.217	.245	.271	.032	.044		<.001
	N	100	100	100	100	100	100	100	100	100	100	100
Total	Pearson Correlation	.589**	.487**	.389**	.513**	.531**	.452**	.560**	.594**	.569**	.449**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	
	N	100	100	100	100	100	100	100	100	100	100	100

*. Correlation is significant at the 0.05 level (2-tailed).
 **. Correlation is significant at the 0.01 level (2-tailed).

Figure 1: Correlations of Performance

Correlations

		A1	A2	B1	B2	C1	C2	D1	D2	E1	E2	Total
A1	Pearson Correlation	1	.125	.050	.270**	.191	.220*	.144	.381**	.381**	.207*	.536**
	Sig. (2-tailed)		.217	.621	.007	.057	.028	.154	<.001	<.001	.039	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
A2	Pearson Correlation	.125	1	.283**	.112	.152	.270**	.226*	.305**	.305**	.226*	.516**
	Sig. (2-tailed)	.217		.004	.265	.132	.007	.024	.002	.002	.024	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
B1	Pearson Correlation	.050	.283**	1	.272**	.322**	.349**	.209	.192	.192	.219	.543**
	Sig. (2-tailed)	.621	.004		.006	.001	<.001	.036	.056	.056	.029	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
B2	Pearson Correlation	.270**	.112	.272**	1	.280**	.048	.220*	.294**	.294**	.291**	.559**
	Sig. (2-tailed)	.007	.265	.006		.005	.633	.028	.003	.003	.003	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
C1	Pearson Correlation	.191	.152	.322**	.280**	1	.056	.428**	.186	.186	.282**	.559**
	Sig. (2-tailed)	.057	.132	.001	.005		.581	<.001	.064	.064	.005	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
C2	Pearson Correlation	.220*	.270**	.349**	.048	.056	1	.037	.260**	.260**	.188	.452**
	Sig. (2-tailed)	.028	.007	<.001	.633	.581		.716	.009	.009	.060	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
D1	Pearson Correlation	.144	.226*	.209*	.220*	.428**	.037	1	.218*	.218*	.351**	.550**
	Sig. (2-tailed)	.154	.024	.036	.028	<.001	.716		.029	.029	<.001	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
D2	Pearson Correlation	.381**	.305**	.192	.294**	.186	.260**	.218*	1	1.000**	.220*	.704**
	Sig. (2-tailed)	<.001	.002	.056	.003	.064	.009	.029		.000	.028	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
E1	Pearson Correlation	.381**	.305**	.192	.294**	.186	.260**	.218*	1.000**	1	.220*	.704**
	Sig. (2-tailed)	<.001	.002	.056	.003	.064	.009	.029	.000		.028	<.001
	N	100	100	100	100	100	100	100	100	100	100	100
E2	Pearson Correlation	.207*	.226*	.219*	.291**	.282**	.188	.351**	.220*	.220*	1	.553**
	Sig. (2-tailed)	.039	.024	.029	.003	.005	.060	<.001	.028	.028		<.001
	N	100	100	100	100	100	100	100	100	100	100	100
Total	Pearson Correlation	.536**	.516**	.543**	.559**	.559**	.452**	.550**	.704**	.704**	.553**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	
	N	100	100	100	100	100	100	100	100	100	100	100

** Correlation is significant at the 0.01 level (2-tailed).
 * Correlation is significant at the 0.05 level (2-tailed).

Figure 2: Correlations of Expectation

Parameters based on p-value:

r count > r table = the item is valid

r count < r table = the item is invalid

r table df
= n-2
= 100 - 2
= 98

r table = 0,196

If the significance value < 0.05 = the item is valid

If the significance value > 0.05 = the item is invalid

Table 2: Validity Test Results

Number	Attributes	Performance	Expectation	R-table	Validity
1	A1	0,589	0,536	0,196	Valid
2	A2	0,487	0,516	0,196	Valid
3	B1	0,389	0,543	0,196	Valid
4	B2	0,513	0,559	0,196	Valid
5	C1	0,531	0,559	0,196	Valid
6	C2	0,513	0,452	0,196	Valid
7	D1	0,560	0,550	0,196	Valid
8	D2	0,594	0,704	0,196	Valid
9	E1	0,569	0,704	0,196	Valid
10	E2	0,449	0,553	0,196	Valid

In this research, of the 10 variables provided, none are invalid. This is because all variables have a pearson correlation value or r count which is more than the r table value, namely, 0.196. In addition, the significance values are also all less than 0.05, which means that all variables can be said to be valid.

4.2. Reliability Test

Reliability test is a test of how stable an instrument is in measuring something. The more reliable a measuring device is, the more stable the instrument readings are. If it provides a Cronbach alpha value > 0.6 through the results of data processing using SPSS software, the data is considered reliable.

Table 3: Reliability Test Results

	Cronbach alpha	Reliability Limit
Performance	0,723	0,600
Expectation	0,739	0,600

Parameters :

Cronbach's alpha value > 0.6 = the item is reliable

Cronbach's alpha value < 0.6 = the item is not reliable

The results of data analysis using the reliability test with Cronbach's alpha technique obtained a performance reliability coefficient value of 0.723 and an expected reliability coefficient value of 0.739 This shows that the data used in the study are reliable or trustworthy because they have a Cronbach's alpha value > 0.6, namely with a value of 0.723 > 0.6 and 0.739 > 0.6.

4.3. Calculation of Service Quality Value (GAP)

In data processing, the results obtained from questionnaires distributed to passengers of the Purabaya Type A Terminal show a gap between the perceived service and passenger expectations. To find out the existing gap, first calculate the average value of services that passengers can feel and the average value of services expected by passengers. In determining the servqual method, it is necessary to find the difference or gap value, using the formula :

$$\text{Gap} = \text{Performance} - \text{Expectation}$$

- If the calculation results are known, the Gap obtained is positive (Performance > Expectations), it states that the service is said to be satisfactory for passengers.
- If the calculation results are obtained, it is known that the Gap obtained is zero (Performance = Expectations), this states that the service is quite satisfying for passengers.
- If the calculation results are obtained, it is known that the Gap obtained is negative (Performance < Expectation), this means that the service does not provide satisfaction to passengers.

Table 4: GAP Analysis

Number	Attributes	Performance	Expectation	Gap
1	C1	4,2	4,14	0,06
2	B2	4,17	4,18	-0,01
3	D1	4,22	4,26	-0,04
4	B1	4,21	4,31	-0,1

Number	Attributes	Performance	Expectation	Gap
5	E1	4,26	4,36	-0,1
6	A2	4,06	4,19	-0,13
7	E2	4,17	4,31	-0,14
8	D2	4,13	4,36	-0,23
9	A1	4,02	4,3	-0,28
10	C2	4,03	4,32	-0,29

Based on the calculation of service quality (gap) carried out on each attribute, there are 9 attributes with a value below zero (negative), namely the bus departure and arrival schedule of -0.01; officer knowledge of bus routes and schedules of -0.04; Purabaya Type A Terminal officers provide precise and accurate information of -0.1; Purabaya Type A Terminal provides special facilities for the elderly and disabled -0.1; Directions, information boards are clearly visible -0.13; Officers provide friendly attention and service to passengers -0.14; Passenger safety and comfort -0.23; Physical facilities at the Terminal are clean and well maintained -0.28; Public complaints or complaints are responded to and processed quickly -0.29. The negative gap value indicates that the level of service obtained by passengers is not satisfactory, so it is necessary to improve and improve the quality of service in public services at the Purabaya Type A Terminal.

4.4. Proposed Improvements

Table 5: Proposed Service Improvements at Purabaya Type A Terminal

Number	Attributes	Proposed Improvements
1	Purabaya Type A Terminal staff provide precise and accurate information.	Purabaya Type A Terminal officers need to be provided with training and evaluation so that they can provide clear and correct information.
2	The staff's knowledge of bus routes and schedules is very good and can provide clear information to the public.	Conduct regular training to ensure staff are up-to-date with bus routes and schedules, including any changes.
3	Vehicle departure and arrival schedules are always on time.	Pay more attention and evaluate the schedule regularly to maintain the timeliness of bus departure and arrival..
4	Purabaya Type A Terminal provides facilities that support special needs, such as the elderly or people with disabilities.	Purabaya Type A Terminal can add special facilities for the elderly and people with disabilities and increase the sensitivity of officers to be on standby to help.
5	Directions, information boards and timetable screens are clear and easy to read.	Ensure that directions, information boards, and timetable screens are kept clear of writing and shapes so that they remain easy to read.
6	Officers provide attention and friendly service to all passengers/community.	Officers should be more friendly in providing services to all passengers.
7	Safety and comfort of passengers while at Purabaya Type A Terminal.	Improve passenger safety and comfort at Purabaya Type A Terminal by adding security personnel and supporting facilities..
8	The physical facilities at Purabaya Type A Terminal (waiting room, toilets, parking area) are clean and well-maintained.	Carry out regular repairs and maintenance in the waiting room, toilets, and parking area to keep them clean.
9	Complaints or grievances submitted by the public at Purabaya Type A Terminal will be responded to and processed quickly.	Expedite the process of responding to and handling public complaints or grievances at Purabaya Type A Terminal to improve user satisfaction.

5. CONCLUSIONS

This study uses the service quality method to measure the level of passenger satisfaction with public services at Terminal Type A Purabaya and provides suggestions for improvement based on the measurement results. Measurement of service quality using the Servqual method is carried out by Gap analysis. There is a gap between expectations and actual service performance at Terminal Type A Purabaya. The results of the analysis show that there are 9 attributes with negative gap values, which indicate that the service received by passengers at Terminal Type A Purabaya is still less than satisfactory. Attributes that need to be improved include bus departure and arrival schedules, knowledge of officers regarding routes and schedules, accuracy of officer information, special facilities for the elderly and disabled, and various other aspects related to comfort, safety, and cleanliness of facilities. Therefore, improvement and enhancement of service quality are very necessary to meet passenger expectations and increase public satisfaction. By always conducting Public Satisfaction Survey activities to get direct feedback from passengers, and immediately following up on every input and assessment from passengers at Terminal Type A Purabaya.

References

- [1] R. Yusuf, H. Hendawati, and L. A. Wibowo, "Pengaruh Konten Pemasaran Shoppe Terhadap Pembelian Pelanggan," *J. Manaj. Pendidik. dan Ilmu Sos.*, vol. 1, no. 2, pp. 506–515, 2020, doi: 10.38035/JMPIS.
- [2] A. Jazuli and S. Fatimah, "Survei Kepuasan Masyarakat Terhadap Pelayanan Publik Kantor Desa Tatah Layap Kecamatan Tatah Makmur Kabupaten Banjar," *J. Ilm. Ekon. Bisnis*, vol. 5, no. 2, pp. 220–237, 2019, doi: 10.35972/jieb.v5i2.273.
- [3] R. Apriani and G. W. Nurcahyo, "Tingkat Kepuasan Pasien RSIA Siti Hawa dalam Upaya Peningkatan Kualitas Pelayanan Menggunakan Metode Service Quality (SERVQUAL)," *J. Sistim Inf. dan Teknol.*, vol. 3, pp. 150–155, 2021, doi: 10.37034/jsisfotek.v3i3.59.
- [4] D. Kuncoro, R. Abimanyu, R. Kurniawan, and K. Umam, "Analisis Tingkat Kepuasan Pelanggan Pada Pelayanan Lahan Parkir Menggunakan Metode Service Quality," *IMTechno J. Ind. Manag. Technol.*, vol. 3, no. 2, pp. 121–127, 2022, doi: 10.31294/imtechno.v3i2.1228.
- [5] R. N. Amalia, R. S. Dianingati, and E. Annisaa', "Pengaruh Jumlah Responden terhadap Hasil Uji Validitas dan Reliabilitas Kuesioner Pengetahuan dan Perilaku Swamedikasi," *Generics J. Res. Pharm.*, vol. 2, no. 1, pp. 9–15, 2022, doi: 10.14710/genres.v2i1.12271.
- [6] Abdullah Rayni, Pardede, A. M. H., & Khair, H. (2023). Design And Development Of A Quality And Quantity Water Monitoring System For Water Tank Based On Internet Of Things. *Journal of Artificial Intelligence and Engineering Applications (JAIEA)*, 3(1), 328–334. <https://doi.org/10.59934/jaiea.v3i1.319>
- [7] Lita, C. N., Pardede, A. M. H., & Siswan Syahputra. (2024). Prototype Design IoT Based Air Quality Monitoring Tool for Urban Environment. *Journal of Artificial Intelligence and Engineering Applications (JAIEA)*, 4(1), 391–395. <https://doi.org/10.59934/jaiea.v4i1.643>