

## Communication and service quality as drivers of public satisfaction in Bojonegoro

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**Abstract** This study examines the influence of communication quality and service quality on public satisfaction within a local government education service context. Although efforts to improve transparency and communication have increased, public satisfaction outcomes remain inconsistent, raising questions about whether communication directly drives satisfaction or depends on service performance. Using a quantitative explanatory design, data were collected from 385 public service users and analysed using PLS-SEM. The study tested three hypotheses: the direct effects of communication quality and service quality on public satisfaction, and the moderating role of service quality in the communication-satisfaction relationship. The results indicate that service quality has a strong and significant positive effect on public satisfaction, confirming its central role in shaping citizens' service evaluations. In contrast, communication quality does not show a significant direct effect on satisfaction. This finding reflects a bureaucratic service environment in which citizens prioritise tangible service outcomes over communicative aspects. Furthermore, service quality significantly moderates the relationship between communication quality and public satisfaction, suggesting that communication becomes meaningful only when supported by reliable service delivery. These findings reveal a service-communication paradox and contribute to public service theory by demonstrating that communication effectiveness is contingent upon service performance.

**Keywords:** communication quality; local government services; public satisfaction; service quality

### INTRODUCTION

Public service delivery remains a central pillar in strengthening governance performance, public trust, and citizen well-being. In contemporary governance studies, the quality of public service is no longer assessed solely through administrative efficiency or compliance with procedural standards. Instead, scholars increasingly emphasise citizens' service experiences, including how public institutions communicate procedures, decisions, and responsibilities to service users (Jacob et al., 2024). Communication—manifested through clarity, transparency, responsiveness, and interpersonal engagement—has therefore been widely discussed as an important element shaping perceptions of legitimacy, fairness, and institutional reliability (Emmanuel & Ewoh, 2025; Veloso et al., 2025).

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However, empirical findings on the role of communication in public service satisfaction remain inconclusive. While communication is often assumed to enhance satisfaction, several studies suggest that communication failures—such as unclear procedures, inconsistent information, or limited responsiveness—can neutralise or even undermine technically sound service processes (Roch & Poister, 2006; Zhu et al., 2024). This indicates that communication may not function as an autonomous driver of satisfaction, but rather as a contingent factor whose effectiveness depends on broader service conditions.

This tension is increasingly visible in Indonesian local government institutions, where standardised performance dashboards, digital service platforms, and public satisfaction indices are widely implemented (Syafarudin & Haris, 2025). Although these instruments aim to improve transparency and accountability, they often provide limited insight into how communication is experienced by citizens during actual service encounters. As a result, formal performance ratings may coexist with persistent public complaints related to procedural ambiguity, delayed responses, and weak interpersonal interaction.

Within the education sector, communication challenges become even more salient due to the diversity of service users, the sensitivity of educational data, and the high stakes associated with administrative outcomes (Castillo et al., 2017; Szedmák et al., 2025). Educational public services—such as student certification, scholarship administration, teacher verification, and complaint handling—require not only technical accuracy but also effective communication to manage expectations and reduce uncertainty. Prior studies have shown that communication quality in educational bureaucracies can shape public perceptions, particularly in problem-solving and complaint-related services (Ardhanayudha et al., 2023).

Despite the growing recognition of its importance, communication quality remains underexamined as an independent construct in public service research. Most empirical studies embed communication within broader service quality frameworks—such as empathy or responsiveness in SERVQUAL—thereby obscuring its distinct conceptual role (Dong et al., 2023). This conceptual limitation restricts understanding of whether communication directly influences public satisfaction or whether its impact depends on the quality-of-service delivery itself.

The Education Office of Bojonegoro Regency offers a relevant empirical context to examine this issue. Bojonegoro is frequently cited as a local government with a strong commitment to transparency and open government initiatives, including the use of digital platforms for service information and public complaints. Nevertheless, while overall Public Satisfaction Index scores for the Education Office are categorised as 'good', several communication-related indicators—such as response time, staff attitude, and complaint handling—continue to show inconsistencies. Similar patterns have been reported in other local government institutions, suggesting structural communication challenges within public service units (Hsu, 2025; Kinack, 2020).

International public administration research further indicates that interpersonal communication and responsiveness often require deliberate institutional capacity building and cannot be resolved solely through procedural standardisation or digitalisation (Manaf et al., 2023; Mustofa et al., 2025). This suggests that communication reforms may have a limited impact if they are not supported by reliable service processes and organisational readiness.

Based on these considerations, this study does not assume that communication quality automatically enhances public satisfaction. Instead, it examines the limits of communication within public service delivery by positioning communication quality alongside service quality in an integrated analytical framework. The study is designed to explore how communication operates within the institutional setting of the Education Office of Bojonegoro Regency, particularly in relation to citizens' satisfaction with educational administrative services.

Specifically, this research investigates the extent to which communication quality is associated with public satisfaction in the Education Office of Bojonegoro Regency, while also examining the role of service quality as a key determinant of satisfaction in educational public services. Beyond assessing these direct relationships, the study further explores whether service quality conditions influence communication quality, thereby shaping how communication is perceived and valued by service users within the Bojonegoro education bureaucracy.

By addressing these interrelated issues, this study contributes to public administration and communication literature by clarifying the conditional role of communication in public service contexts. Empirically, it offers context-specific insights into the dynamics of educational governance in Bojonegoro Regency. Conceptually, it advances an integrated perspective that treats communication not as a substitute for service performance, but as a complementary element whose effectiveness depends on the reliability and quality of service delivery.

## **METHODOLOGY**

This study employed a quantitative explanatory research design to examine the structural relationships among communication quality, service quality, and public satisfaction within the public service environment of the Education Office of Bojonegoro Regency. An explanatory design is appropriate for testing theoretically grounded causal relationships and interaction effects among latent constructs, in line with recent developments in public administration and communication studies that emphasise empirical validation of behavioural and perceptual models (Chan & Thong, 2021; Permana, 2023).

The survey was conducted within the institutional scope of the Education Office of Bojonegoro Regency, which oversees administrative educational services for primary and secondary education institutions across the regency. Data collection focused on service users who accessed administrative services directly through the Education Office, including services related to student certification, school administration, teacher affairs, and complaint handling. The survey was implemented through direct field data collection, where respondents were approached immediately after completing a service transaction. This approach ensured that responses captured users' perceptions at the 'moment of truth', when service experience was still salient.

A total of 385 respondents participated in the survey. Respondents were selected using an accidental sampling technique; however, this approach is more accurately characterised as naturalistic or situational sampling, as data were collected from actual service users in their organic service environment rather than from a detached or simulated setting. Such an approach is particularly suitable for public service research, as it prioritises ecological validity by capturing authentic user experiences immediately following service encounters. This strategy reduces recall bias and strengthens the relevance of perceptual evaluations in real-world bureaucratic interactions (Sugiyono, 2022).

The sample size of 385 respondents exceeds the minimum requirements for Partial Least Squares Structural Equation Modelling (PLS-SEM). While earlier studies often relied on the '10-times rule', recent methodological literature considers this approach outdated and recommends more rigorous methods such as the inverse square root method or power-based calculations (Hair & Alamer, 2022; Hair et al., 2021). Based on these contemporary standards, the sample size used in this study is more than sufficient to ensure stable parameter estimation, adequate statistical power, and reliable detection of interaction effects within the structural model.

The primary measurement instrument was adapted from Indonesia's official Public Satisfaction Index, which consists of eleven indicators assessing core service attributes such as service procedures, service time, staff competence, complaint handling, and service facilities. To address conceptual limitations of the standard IKM, the instrument was expanded by incorporating four indicators of communication quality: clarity of information, interpersonal communication, responsiveness, and transparency. These dimensions are widely recognised in contemporary communication and public service literature as critical elements of citizen-government interaction (Zhu et al., 2024).

All measurement items employed a four-point Likert scale (1 = very poor to 4 = very good), consistent with national IKM guidelines. While PLS-SEM typically benefits from scales with more response categories to increase variance, the use of a four-point scale was intentionally retained to ensure institutional compatibility and respondent familiarity. The absence of a neutral midpoint was addressed analytically by examining data distribution characteristics, including skewness and kurtosis, during the preliminary analysis. Previous studies indicate that PLS-SEM remains robust under non-normal data conditions and limited scale variance, particularly when sample size is adequate (Hair et al., 2021).

Before full deployment, the questionnaire underwent content validation by academic experts in communication and public administration to ensure conceptual clarity and contextual

relevance. A pilot test involving 30 respondents was conducted to assess readability, comprehension, and item interpretation. Minor revisions were made based on pilot feedback. Ethical standards were strictly observed: participation was voluntary, anonymity was guaranteed, and only respondents who had completed an actual service transaction were included. Incomplete or invalid responses were excluded to maintain data integrity, following best practices in survey-based research (Sugiyono, 2022).

Data analysis was conducted using SmartPLS 4, which is widely recommended for predictive modelling and complex structural analysis in social science research (Hoyle, 2012). The analysis followed a two-stage procedure. First, the measurement model was evaluated by assessing indicator reliability (outer loadings), internal consistency reliability (Cronbach's alpha and composite reliability), and convergent validity using Average Variance Extracted (AVE). Discriminant validity was assessed using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio, in accordance with established PLS-SEM standards (Hair et al., 2021).

In the second stage, the structural model was evaluated by examining collinearity using Variance Inflation Factor (VIF) values, estimating path coefficients, and assessing explanatory power through  $R^2$  values. Predictive relevance was evaluated using  $Q^2$  values obtained via blindfolding procedures. The significance of hypothesised relationships was tested using bootstrapping with 5,000 subsamples, enabling robust estimation of t-statistics and confidence intervals (Hair et al., 2021).

Consistent with the study's theoretical framework, service quality was modelled as a moderating variable that conditions the relationship between communication quality and public satisfaction. The moderation effect was tested using the product indicator approach in SmartPLS 4, which is appropriate for interaction analysis involving reflective constructs. This approach allows direct estimation of interaction effects while preserving the original measurement properties of the latent variables. The moderation analysis was conducted simultaneously with the structural model estimation, ensuring consistency between theoretical assumptions and analytical procedures (Hair et al., 2021).

The use of PLS-SEM offers several methodological advantages aligned with the study's objectives. PLS-SEM is particularly suitable for complex, prediction-oriented models and does not require multivariate normality, making it appropriate for real-world public service data characterised by perceptual measures and institutional constraints (Hair & Alamer, 2022). Moreover, the integration of a nationally standardised measurement instrument with advanced structural modelling techniques enhances both the contextual relevance and analytical rigour of the study.

Overall, the methodological framework balances empirical robustness and institutional realism. By combining naturalistic data collection, standardised measurement, and advanced moderation analysis, this study contributes to a growing body of research advocating the integration of communication constructs into service quality models in public sector performance evaluation (Schultes et al., 2025; Yegon et al., 2023).

## RESULTS AND DISCUSSION

### Results

The evaluation of the outer model in Figure 1 shows that the communication quality (X1) construct exhibits strong outer loading values across most of its indicators. Indicators X1.2 and X1.3 appear as the most dominant items, with loading values of 0.904 and 0.906, respectively, indicating a very high contribution to the formation of the communication quality construct. Indicator X1.4 also demonstrates a high loading value of 0.807, while indicators X1.5 and X1.6 show moderate loading values of 0.680 and 0.656. In addition, indicator X1.1 reinforces the construct with a loading value of 0.816. Overall, all indicators within the X1 construct exceed the minimum threshold of 0.60, indicating that they are valid measures of communication quality.

For the service quality (X2) construct, the outer loading values vary between 0.509 and 0.750. The strongest indicator is X2.4, with a loading value of 0.750, followed by X2.7 (0.716), X2.1 (0.692), X2.6 (0.689), and X2.2 (0.687), all of which demonstrate good contributions to the service quality construct. Meanwhile, indicators X2.5 and X2.8 show moderate loading values of 0.648 and 0.603, respectively. However, indicator X2.3 records the lowest outer loading value (0.509), suggesting that this item has the weakest contribution to the service quality construct and may require further evaluation in subsequent instrument development.

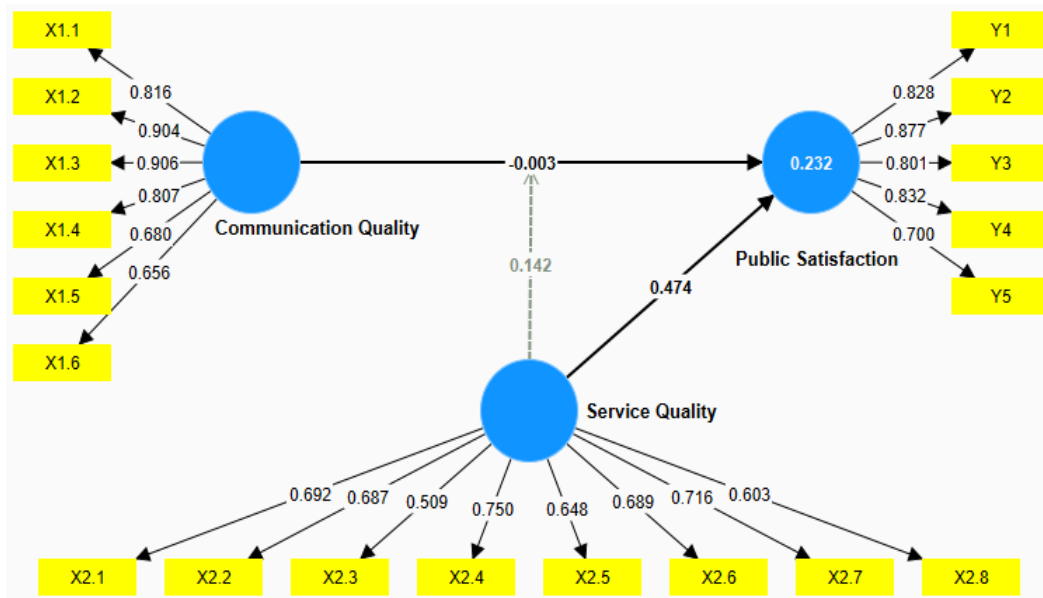


Figure 1. Algorithm testing results  
 Source: SmartPLS4 (2025)

Table 1. Outer loadings results

	Communication quality (X1)	Service quality (X2)	Public satisfaction (Y)
X1.1	0,816		
X1.2	0,904		
X1.3	0,906		
X1.4	0,807		
X1.5	0,680		
X1.6	0,656		
X2.1		0,692	
X2.2		0,687	
X2.3		0,509	
X2.4		0,750	
X2.5		0,648	
X2.6		0,689	
X2.7		0,716	
X2.8		0,603	
Y1			0,828
Y2			0,877
Y3			0,801
Y4			0,832
Y5			0,700

Source: SmartPLS4 (2025)

The public satisfaction (Y) construct demonstrates excellent measurement performance. All indicators—Y1 through Y5—show high outer loading values, ranging from 0.700 to 0.877. Indicator Y2 is the strongest (0.877), followed by Y4 (0.832), Y1 (0.828), and Y3 (0.801), while Y5 remains acceptable with a loading value of 0.700. These findings indicate that all Y indicators consistently and strongly represent the public satisfaction construct.

Overall, the outer loading results indicate that the three constructs— communication quality, service quality, and public satisfaction—exhibit good convergent validity, except for one

indicator within the service quality construct (X2.3), which shows the weakest contribution and may be considered for revision or removal in subsequent analyses.

**Table 2.** Outer weights results

	<b>Communication quality (X1)</b>	<b>Service quality (X2)</b>	<b>Public satisfaction (Y)</b>
<b>X1.1</b>	0,267		
<b>X1.2</b>	0,247		
<b>X1.3</b>	0,248		
<b>X1.4</b>	0,195		
<b>X1.5</b>	0,148		
<b>X1.6</b>	0,117		
<b>X2.1</b>		0,155	
<b>X2.2</b>		0,129	
<b>X2.3</b>		0,061	
<b>X2.4</b>		0,201	
<b>X2.5</b>		0,112	
<b>X2.6</b>		0,192	
<b>X2.7</b>		0,235	
<b>X2.8</b>		0,414	
<b>Y1</b>			0,351
<b>Y2</b>			0,265
<b>Y3</b>			0,183
<b>Y4</b>			0,222
<b>Y5</b>			0,208

Source: SmartPLS4 (2025)

The results of the outer weights analysis presented in Table 2 demonstrate the relative contribution of each indicator in forming the latent constructs in a composite manner. For the communication quality (X1) construct, indicators X1.3 and X1.2 emerge as the strongest contributors, with weights of 0.248 and 0.247, respectively, indicating that these items are the most dominant in defining communication quality. Indicator X1.1 also shows a substantial contribution, with a weight of 0.267, signifying its important role in shaping the construct score. Meanwhile, indicators X1.4 (0.195), X1.5 (0.148), and X1.6 (0.117) exhibit moderate to lower contributions yet still play a role in reinforcing the composite structure of the communication quality construct.

For the service quality (X2) construct, the indicators display more varied contributions. Indicator X2.8 demonstrates the highest contribution, with a weight of 0.414, making it the most dominant item in shaping perceptions of service quality. Indicators X2.7 (0.235), X2.4 (0.201), and X2.6 (0.192) also contribute meaningfully, indicating strong alignment between indicator weights and the substantive meaning of the service quality construct. In contrast, indicator X2.3 shows the lowest weight (0.061), suggesting that this item contributes minimally to the construct and may not strongly reflect the intended dimension of service quality within the context of this study. Other indicators—X2.1 (0.155), X2.2 (0.129), and X2.5 (0.112)—exhibit moderate contributions and remain relevant in forming the overall construct.

Regarding the public satisfaction (Y) construct, indicator Y1 holds the highest weight (0.351), indicating that it is the most dominant component in explaining the level of public satisfaction. Indicators Y4 (0.222), Y5 (0.208), and Y2 (0.265) provide relatively strong and consistent contributions. Meanwhile, indicator Y3 shows the lowest contribution (0.183), yet still falls within an acceptable range for reflective measurement.

Overall, the pattern of outer weights suggests that several indicators play a more dominant role in forming the composite scores of their respective constructs. These findings offer important insights into which indicators exert the strongest influence in measuring Communication Quality, Service Quality, and Public Satisfaction, while also identifying indicators—particularly X2.3—that may require further evaluation due to their very low contribution.

**Table 3.** Construct reliability and validity results

	<b>Cronbach's alpha</b>	<b>Composite reliability (rho_a)</b>	<b>R-square</b>	<b>Average variance extracted (AVE)</b>
<b>Communication quality (X1)</b>	0,888	0,922		0,641
<b>Public satisfaction (Y)</b>	0,871	0,908	0,232	0,656
<b>Service quality (X2)</b>	0,849	0,888		0,443

Source: SmartPLS4 (2025)

Table 3 presents the results of the construct reliability and validity assessments for the three latent variables examined in this study. The Communication Quality (X1) construct demonstrates strong internal consistency, with a Cronbach's alpha value of 0.888 and a composite reliability (rho\_a) of 0.922, both of which exceed the commonly accepted threshold of 0.70. The Average Variance Extracted (AVE) value of 0.641 also surpasses the minimum requirement of 0.50, indicating that the construct captures more than half of the variance of its indicators, thereby confirming adequate convergent validity.

Similarly, the public satisfaction (Y) construct exhibits high reliability, as reflected by its Cronbach's alpha of 0.871 and composite reliability of 0.908. The AVE value of 0.656 further supports strong convergent validity. Additionally, the R<sup>2</sup> value for public satisfaction is 0.232, suggesting that 23.2% of the variance in public satisfaction is explained by the predictor variables in the structural model. In studies involving human perceptions and public service contexts, where satisfaction is influenced by multiple institutional and behavioural factors, this level of explanatory power is considered meaningful and substantively relevant.

In contrast, the service quality (X2) construct, while demonstrating adequate reliability with a Cronbach's alpha of 0.849 and composite reliability of 0.888, presents a lower AVE value of 0.443. This value falls slightly below the recommended threshold of 0.50, indicating that the construct explains less than half of the variance of its indicators. This suggests that some indicators—particularly those with lower outer loadings—may not contribute sufficiently to the underlying construct and may require refinement or revision in future measurement development. Overall, the reliability results for all constructs are robust, while the convergent validity assessment indicates strong measurement quality for Communication Quality and Public Satisfaction.

Although the Average Variance Extracted (AVE) value for service quality (X2) is below the recommended threshold of 0.50, this does not necessarily invalidate the construct. As shown in Table 3, the Composite Reliability (CR) value for service quality reaches 0.888, which is substantially higher than the minimum acceptable level of 0.60. When composite reliability is sufficiently high, convergent validity can still be considered adequate, particularly in exploratory and applied research contexts. The slightly lower AVE value in this study is primarily influenced by indicator X2.3, which exhibits the weakest outer loading (0.509). However, given the strong overall reliability and the contextual complexity of public service perception measurement, the service quality construct is retained and considered statistically and substantively acceptable for further structural model analysis.

The structural model evaluation includes an assessment of the model's explanatory power through the R-square (R<sup>2</sup>) value and an examination of the effect size of each exogenous construct using the f-square (f<sup>2</sup>) statistic. The R<sup>2</sup> value for Public Satisfaction (Y) is 0.232 (see Table 4), indicating that communication quality (X1), service quality (X2), and their interaction jointly explain 23.2% of the variance in public satisfaction. In public service and behavioural research, where satisfaction is shaped by diverse institutional, social, and psychological factors, this level of explanatory power is substantively meaningful. From a service monitoring perspective, this finding implies that nearly one-quarter of public satisfaction can be influenced through

improvements in service delivery and its alignment with communication practices. Therefore, this result should be interpreted not as a limitation, but as a substantial administrative lever for policy and managerial intervention.

The f-square values provide insight into the contribution of each predictor to the endogenous variable. Service quality (X2) exhibits an f-square value of 0.162, which corresponds to a medium effect size, indicating that service quality plays a substantive and influential role in determining public satisfaction. This finding aligns with the path coefficient results, reaffirming that service quality is the strongest predictor in the model.

In contrast, the direct effect of communication quality (X1) on public satisfaction yields an f-square value of 0.000, indicating no measurable effect size. This confirms that communication quality, when considered independently, does not substantially contribute to explaining variations in public satisfaction.

**Table 4.** F-square results

	<b>Public satisfaction (Y)</b>
<b>Communication quality (X1)</b>	0,000
<b>Public satisfaction (Y)</b>	
<b>Service quality (X2)</b>	0,162
<b>Service quality (X2) x communication quality (X1)</b>	0,022

Source: SmartPLS4 (2025)

The absence of a measurable effect of communication quality on public satisfaction ( $f^2 = 0.000$ ;  $p = 0.960$ ) represents a particularly noteworthy finding. This result does not merely indicate statistical insignificance; rather, it suggests that communication quality is empirically 'invisible' when evaluated independently. In the context of the Bojonegoro education bureaucracy, this phenomenon reflects what may be described as a form of polite bureaucracy, where courteous language, formal responsiveness, and procedural communication fail to generate satisfaction if core administrative outcomes—such as permits, certifications, or educational assistance—are not delivered effectively. In this sense, communication without service performance is perceived as symbolic rather than substantive by service users.

The interaction term (service quality × communication quality) produces an f-square value of 0.022, representing a small effect size. Although modest, this effect is statistically meaningful and supports the conclusion that service quality moderates the influence of communication quality on satisfaction. The presence of even a small interaction effect highlights the nuanced role of communication within the broader service context, suggesting that communication contributes to satisfaction only when accompanied by high-quality service delivery.

Taken together, the R-square and f-square analyses indicate that the model offers a credible explanatory structure, with service quality emerging as the dominant predictor and communication quality playing a supporting role through interaction effects. These findings reinforce the central importance of service performance in shaping satisfaction outcomes in public service environments.

The Q-square ( $Q^2$ ) statistic was calculated to assess the model's predictive relevance using the Stone-Geisser criterion. With a single endogenous construct in the model, the  $Q^2$  value is derived directly from the R-square value. The resulting  $Q^2$  of 0.232 indicates that the model possesses acceptable predictive relevance, meaning that the exogenous constructs—communication quality, service quality, and their interaction—have meaningful predictive capability for public satisfaction.

According to Hair et al. (2021),  $Q^2$  values greater than zero indicate that the model has predictive relevance, while values around 0.25 represent a medium level of predictive power. Thus, with  $Q^2 = 0.232$ , the model achieves predictive relevance that is close to the medium threshold. This suggests that the model is sufficiently capable of predicting public satisfaction outcomes, although additional predictors may further improve predictive accuracy. Overall, the  $Q^2$  analysis confirms that the structural model is not only explanatory but also demonstrates valid predictive capability, reinforcing the robustness and practical utility of the research model.

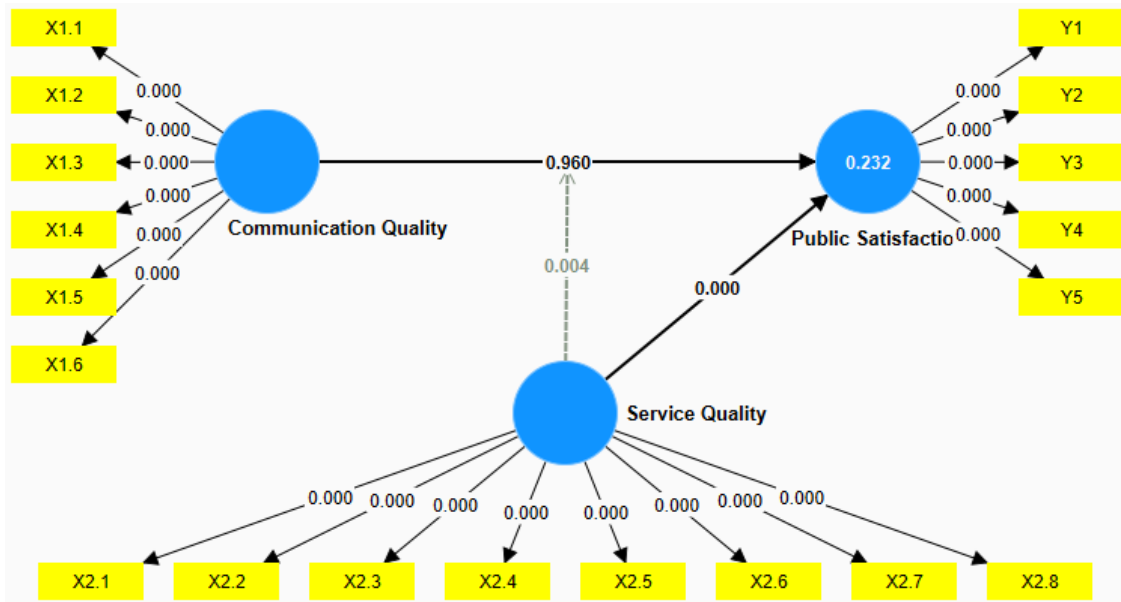


Figure 2. Bootstrapping testing results  
 Source: SmartPLS4 (2025)

Table 5. Total effects

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Communication quality (X1) -> Public satisfaction (Y)	-0,003	0,000	0,062	0,050	0,960
Service quality (X2) -> Public satisfaction (Y)	0,474	0,481	0,056	8,403	0,000
Service quality (X2) x Communication quality (X1) -> Public satisfaction (Y)	0,142	0,137	0,050	2,844	0,004

Source: SmartPLS4 (2025)

The bootstrapping results presented in Table 5 provide a comprehensive evaluation of the structural relationships within the model by examining the significance of each path coefficient. These coefficients represent the total effects of communication quality (X1), Service Quality (X2), and their interaction (X2 × X1) on public satisfaction (Y). The findings reveal a clear distinction in how each construct contributes to overall satisfaction outcomes.

To begin with, the direct effect of communication quality (X1) on public satisfaction (Y) is statistically insignificant. The path coefficient is extremely small ( $\beta = -0.003$ ), accompanied by a negligible t-statistic (0.050) and a very high p-value (0.960). These results indicate that improvements in communication—such as message clarity, responsiveness, or information accessibility—do not independently enhance public satisfaction. This suggests that communication efforts alone do not sufficiently address the expectations or perceptions of service users and therefore fail to generate a meaningful increase in satisfaction levels.

In contrast, service quality (X2) demonstrates a strong, positive, and statistically significant direct effect on public satisfaction. The path coefficient is substantial ( $\beta = 0.474$ ), supported by a high t-value (8.403) and a p-value of less than 0.001. This indicates that the dimensions of service quality—reliability, responsiveness, empathy, assurance, and tangibles—serve as the primary drivers of public satisfaction. This finding underscores that citizens' experiences of actual service delivery processes play a decisive role in shaping overall satisfaction.

Although communication quality does not produce a significant direct effect, its influence becomes evident through an indirect pathway reflected in the moderating interaction. The interaction term between service quality and communication quality (X2 × X1) shows a statistically significant positive coefficient ( $\beta = 0.142$ ), with a t-value of 2.844 and a p-value of 0.004. This result confirms the presence of a meaningful moderation effect: service quality strengthens the influence of communication quality on public satisfaction. In practical terms,

communication becomes impactful only when supported by high-quality service performance. When service quality is strong, effective communication—such as timely updates, courteous interactions, and transparent information—plays a more substantial role in enhancing satisfaction.

This moderating process also reflects the model's key indirect effect, in which communication quality contributes to public satisfaction not independently, but conditionally through its interaction with service quality. The indirect effect illustrates that communication has value primarily in contexts where service delivery meets or exceeds user expectations. Thus, the combined influence of both constructs forms a synergistic relationship that improves satisfaction outcomes more effectively than either variable alone.

Overall, the integrated analysis demonstrates that service quality is the dominant predictor of public satisfaction, while communication quality becomes meaningful only in the presence of strong service performance. The significant moderating effect emphasises the need for public service organisations to align communication strategies with service delivery improvements, ensuring that high-quality communication is embedded within a high-performing service environment in order to maximise public satisfaction.

The empirical findings of this study should be interpreted not only from a statistical perspective but also within the administrative reality of local public services in Bojonegoro Regency, Indonesia, particularly within the institutional context of the Education Office of Bojonegoro Regency. The results reveal a statistically robust and contextually grounded model in which service performance emerges as the dominant driver of public satisfaction, while communication quality operates as a conditional supporting mechanism rather than an independent determinant.

## **Discussion**

The findings of this study provide significant contributions to the scholarly understanding of public service quality, communication effectiveness, and citizen satisfaction. By examining both the direct and moderating effects of communication quality and service quality on public satisfaction, this research offers a comprehensive view of how communication and operational performance interact within public sector service delivery. The results reveal a particularly noteworthy pattern: while service quality exerts a strong direct effect on public satisfaction, communication quality does not demonstrate a significant direct influence. Instead, communication quality becomes impactful only when combined with high levels of service quality, reflecting a conditional and synergistic relationship.

The empirical findings of this study should be interpreted not only from a statistical perspective but also within the administrative reality of local public services in Bojonegoro Regency, Indonesia, particularly within the institutional context of the Education Office of Bojonegoro Regency. The results reveal a statistically robust and contextually grounded model in which service performance emerges as the dominant driver of public satisfaction, while communication quality operates as a conditional supporting mechanism rather than an independent determinant.

One of the most striking findings is the complete statistical absence of the direct effect of communication quality on public satisfaction. This result should not be interpreted merely as statistical insignificance, but rather as empirical invisibility. In practical administrative terms, this finding reflects the phenomenon of polite bureaucracy, where courteous communication, formal responsiveness, and procedural friendliness fail to generate satisfaction if the core administrative outputs—such as permits, certification services, or educational assistance—are not delivered effectively. This indicates that citizens evaluate public services primarily based on outcome reliability rather than communicative experience. In this context, communication without service performance is perceived as symbolic rather than substantive.

Furthermore, the R-square value of 0.232 should not be framed as modest. In public service perception research, where satisfaction is influenced by complex social, institutional, and psychological variables, explaining 23.2% of satisfaction variance is substantively strong. From a governance perspective, this indicates that nearly one-quarter of public satisfaction can be directly influenced through improvements in service delivery quality and its integration with communication practices. Therefore, this level of explanatory power represents a substantial administrative leverage point, providing policymakers and service managers with a clear

evidence-based intervention focus: strengthening service reliability and embedding communication practices within performance-oriented service systems.

The strong and significant influence of service quality on public satisfaction aligns with an extensive body of literature demonstrating that satisfaction is primarily shaped by operational dimensions of service performance. Scholars across fields such as public management, public administration, and service science consistently emphasise the central role of reliability, responsiveness, assurance, empathy, and tangibles—the classical SERVQUAL dimensions—when evaluating public service outcomes (Castillo et al., 2017; Yegon et al., 2023; Zhu et al., 2024). In the context of the Education Office of Bojonegoro Regency, this statistical finding is reinforced by direct field observations conducted during the data collection process. Service users frequently interacted with administrative units responsible for document legalisation, student data verification, and education-related permits, where timeliness, accuracy of output, and procedural certainty were perceived as the most critical aspects of service quality.

Observational evidence indicates that service users in Bojonegoro placed considerable emphasis on whether their administrative requests—such as school transfer letters, certification validation, or scholarship documentation—were completed correctly and within the expected timeframe. When these core service outputs were delivered efficiently, respondents tended to express satisfaction even when interpersonal communication was relatively minimal. Conversely, delays, repeated visits, or incomplete documentation often generated dissatisfaction, regardless of how politely or clearly staff communicated. This reinforces the statistical finding that service quality functions as the primary driver of satisfaction and provides empirical grounding for the strong path coefficient observed in the structural model.

This is further supported by the measurement model results, in which the indicators for service quality exhibit relatively high loadings and weights, demonstrating that respondents assigned substantial importance to operational attributes such as responsiveness, reliability, and professionalism. These empirical patterns suggest that, within the Bojonegoro education bureaucracy, citizens evaluate services primarily through tangible outcomes and procedural effectiveness. As such, the findings reaffirm the enduring relevance of the SERVQUAL framework, even within contemporary digital and hybrid public service environments, where fundamental expectations regarding service competence remain central to satisfaction judgements.

A particularly striking result of this study is the insignificant direct effect of communication quality on public satisfaction, indicated by a near-zero path coefficient ( $\beta = -0.003$ ), an extremely low t-statistic (0.050), and a very high p-value (0.960). This suggests that improvements in communicative aspects—such as message clarity, responsiveness, transparency, tone, or information accessibility—do not independently enhance public satisfaction. Field observations in the Bojonegoro Education Office further illuminate this phenomenon. While front-line staff generally demonstrated courteous behaviour and provided basic procedural explanations, such communication was often perceived as secondary when service outputs were delayed or required multiple follow-ups. In these situations, communication was viewed as formalistic rather than problem-solving, reinforcing the perception that communication alone does not compensate for weak service performance.

This finding can be theoretically interpreted through Expectation-Confirmation Theory (ECT), which posits that satisfaction emerges when actual performance meets or exceeds prior expectations (Abbas et al., 2021; Xiao et al., 2022). In the Bojonegoro context, citizens appeared to prioritise the confirmation of outcome-based expectations—such as completed documents or resolved administrative issues—over communicative niceties. When these expectations were unmet, communication quality functioned merely as an auxiliary factor with limited influence, consistent with previous empirical findings (March & Girsang, 2025; Mishra et al., 2023; Shukla et al., 2025).

The results also align with Service-Dominant Logic (SDL), which conceptualises communication as an operand resource that facilitates value creation but does not independently generate value (Castillo et al., 2017). The empirical evidence from Bojonegoro supports this view, as communication only gained relevance when embedded within effective service processes. Similar patterns have been observed in prior studies, where communication failed to directly predict satisfaction in public service settings characterised by inconsistent service delivery (Van Ryzin, 2004; Dugenio-nadela et al., 2023; Schultes et al., 2025).

Importantly, the present study reveals a significant moderating effect of service quality on the relationship between communication quality and public satisfaction. The positive interaction coefficient ( $\beta = 0.142$ ,  $p = 0.004$ ) indicates that communication becomes meaningful when service quality is already perceived as high. In practical terms, observations in the Bojonegoro Education Office suggest that when administrative services were delivered efficiently—such as same-day document processing or clear resolution of issues—communication practices like timely updates, courteous explanations, and transparency significantly enhanced the overall service experience. This supports the notion of strategic complementarity, whereby communication amplifies the positive effects of strong service performance rather than substituting for it (Hair & Alamer, 2022; Hoyle, 2012).

Overall, these findings underscore the importance of situating communication within a broader service ecosystem. In the Bojonegoro education bureaucracy, communication should not be treated as a standalone managerial instrument but as an integrated component that derives its effectiveness from reliable and efficient service delivery. This perspective aligns with recent calls for integrated communication-service frameworks in public administration research (Chan & Thong, 2021; Dugenio-nadela et al., 2023) and highlights the need for policy interventions that prioritise service performance as the foundation upon which effective communication can meaningfully enhance public satisfaction.

## **CONCLUSION**

This study concludes that service quality is the most decisive factor shaping public satisfaction within the Education Office of Bojonegoro Regency. The findings demonstrate that citizens primarily evaluate public services based on tangible service performance, such as reliability, accuracy, and timeliness. Communication quality, by contrast, does not exert a significant direct effect on satisfaction, indicating that communicative efforts alone are insufficient to improve public evaluations when they are not supported by effective service delivery. However, communication quality becomes influential through a significant moderating mechanism, enhancing satisfaction only in contexts where service quality is already high.

Theoretically, this study contributes by explicitly identifying the limits of communication in public service contexts. It challenges the dominant assumption that improved communication automatically leads to higher satisfaction, instead demonstrating that communication functions as a performance-dependent complement rather than a substitute. By integrating perspectives from Expectation-Confirmation Theory and Service-Dominant Logic, the study positions performance as the primary driver of satisfaction and communication as a reinforcing mechanism that amplifies, but cannot replace, service outcomes.

Practically, the findings suggest that educational service institutions in Bojonegoro should prioritise strengthening core service performance before expanding communication initiatives. Communication strategies—such as transparency, responsiveness, and information accessibility—are most effective when embedded within reliable and efficient service systems. As public institutions increasingly adopt digital and citizen-oriented governance models, aligning communication practices with actual service capacity becomes essential for generating sustainable public satisfaction.

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