

# How Effective Principal Communication Drives Staff Performance: Robust Evidence from a Regression Study in a Pharmacy Vocational School

Hesti Fitriani<sup>1</sup>, Irawati<sup>2</sup>, Rini Setyaningsih<sup>3</sup>, Edi Iskandar<sup>4</sup>, Mamat Rahmatullah<sup>5</sup>

<sup>1,2,3,4</sup>Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia

<sup>5</sup>Universitas Islam Negeri Sultan Maulana Hasanuddin Banten, Serang, Indonesia

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## ABSTRACT

Effective communication is widely recognized as a core driver of educational leadership, yet its direct impact on staff performance remains underexplored in vocational school settings. This study seeks to provide compelling empirical evidence on how principal communication effectiveness contributes to measurable improvements in educational staff performance at a Pharmacy Vocational High School in Indonesia. Using a quantitative design, simple linear regression was applied to data collected from all 73 educational staff through a total sampling approach. The analysis examined the predictive power of principal communication effectiveness on staff performance outcomes. The results reveal a strong, statistically significant effect, with principal communication accounting for 71.4% of the variance in staff performance ( $R^2 = 0.714$ ). A robust positive correlation was also observed ( $r = 0.845$ ,  $p = 0.005$ ), indicating that staff performance tends to increase substantially when leadership communication improves. The findings underscore the strategic importance of communication-centered leadership in strengthening school performance. By showing that a single leadership variable decisively contributes to staff effectiveness, this study highlights the need for educational institutions—especially vocational schools—to invest in sustained capacity-building in communication for school leaders. Future research is encouraged to explore complementary leadership factors that can further optimize performance outcomes.

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## Corresponding Author:

Rini Setyaningsih

Universitas Islam Negeri Sultan Syarif Kasim Riau, Indonesia.

Email: [rinisetyaningsih28@gmail.com](mailto:rinisetyaningsih28@gmail.com)

## 1. INTRODUCTION

Teacher performance is widely recognized as a critical determinant of educational quality and student learning outcomes (Yang & Kaiser, 2022; Zhou et al., 2023; Parveen et al., 2024). Effective teachers not only demonstrate strong pedagogical and subject-matter expertise but also the capacity to inspire, support, and engage students in meaningful learning processes. Research consistently shows that teacher performance contributes substantially to school effectiveness and long-term student achievement, making it a central focus of educational improvement efforts worldwide (Podolsky et al., 2016; Boonen et al., 2014). As a result, strengthening teacher performance requires comprehensive institutional support, including leadership practices that foster motivation, professional growth, and instructional coherence.

Among various leadership practices, effective communication has emerged as a foundational dimension that shapes how schools function and how teachers perform. Communication in educational organizations goes beyond the transmission of information; it involves building shared understanding, establishing trust, and coordinating instructional efforts to achieve organizational goals (Gumus et al., 2020).

Scholars emphasize that leadership communication strongly influences teachers' psychological empowerment, work engagement, and professional commitment, all of which drive higher classroom performance (Abu Nasra & Arar, 2020; Nguni et al., 2006).

Empirical evidence further supports the association between communication-based leadership and improvements in teacher motivation, job satisfaction, and organizational citizenship behavior—factors closely linked to improved teaching quality (Huang et al., 2019; Leithwood et al., 2020). Effective communication enables school leaders to articulate a clear vision, provide constructive feedback, promote collaborative problem-solving, and cultivate a favorable organizational climate (Hallinger et al., 2016). These processes are fundamental in vocational schools, where teachers face complex instructional demands related to technical skills, practicum supervision, and the implementation of industry-aligned curricula.

Headteachers as instructional and organizational leaders play a pivotal role in shaping communication dynamics within schools. Studies show that leaders who communicate openly, consistently, and empathetically tend to foster higher trust, collaboration, and teacher engagement (Aydin et al., 2013). Communication-driven leadership also enhances professional learning communities by facilitating dialogue, shared decision-making, and collegial support—conditions that strengthen teacher performance and school effectiveness (Lomos et al., 2011; Lomos et al., 2011). In addition to nurturing interpersonal relationships, effective communication contributes to operational efficiency, enabling smoother coordination, conflict management, and policy implementation within the school environment (Ghavifekr & Ramzy, 2020).

Despite extensive evidence on the importance of leadership communication, empirical studies specifically examining its direct influence on teacher performance in vocational school contexts remain limited, especially in Southeast Asia. Vocational schools differ from general education settings due to their industry-oriented curricula, performance-based competencies, and intensive practical learning requirements. These contextual differences underscore the need for research examining how leadership communication affects teacher performance in such specialized environments.

To address this gap, the present study investigates the influence of the principal's effective communication on teacher performance at a Pharmacy Vocational High School in Indonesia. By providing empirical evidence from a context that has received limited scholarly attention, this study contributes to the broader literature on leadership communication and teacher performance while offering practical insights for strengthening school leadership practices in vocational education.

## **2. RESEARCH METHOD**

### *2.1. Research Design*

This study employed a quantitative research design, using a cross-sectional survey. The primary objective was to examine the influence of the principal's effective communication on teacher performance by collecting and analyzing numerical data. A quantitative design was selected because it enables objective measurement, statistical verification, and generalizable conclusions about the relationship between the variables under investigation.

### *2.2. Research Setting and Duration*

The study was conducted at Ikasari Pharmacy Vocational High School (SMK Farmasi Ikasari), located in Pekanbaru, Riau Province, Indonesia. The institution was selected for its organizational structure, which emphasizes communication-driven leadership and performance-based instructional practices. Data collection was conducted from December 2023 to July 2024, providing sufficient time for instrument testing, data validation, and robust analysis.

### *2.3. Participants*

The population consisted of all educational staff and the principal of SMK Farmasi Ikasari Pekanbaru, totaling 73 participants. Given the relatively small population, a total sampling technique (census) was applied, ensuring that every member of the population was included as a respondent. This approach enhances the accuracy of the findings and minimizes sampling bias.

### *2.4. Variables*

The study examined two primary variables: (1) principal's effective communication as the independent variable (X), and (2) educational staff performance as the dependent variable (Y). Both constructs were operationalized using multidimensional indicators adapted from established leadership and performance measurement frameworks in educational research, ensuring conceptual rigor and alignment with internationally recognized standards. To enhance measurement accuracy, each variable was assessed through validated Likert-scale items that captured behavioral, relational, and outcome-based dimensions, allowing the

analysis to reflect not only the frequency of communication practices but also their perceived quality and impact on staff performance.

### 2.5. Instruments

Data were collected using a structured questionnaire consisting of Likert-scale items (1 = strongly disagree to 5 = strongly agree). The principal's effective communication scale contained 18 items measuring clarity, openness, responsiveness, feedback practices, and interpersonal communication. The educational staff performance scale consisted of 21 items assessing instructional quality, task completion, discipline, collaboration, and work motivation. Expert validation was conducted to assess content relevance, clarity, and alignment with theoretical constructs.

### 2.6. Data Collection Procedures

Questionnaires were administered directly to all staff members and returned within the data collection period. Supporting documents, such as school reports, performance evaluations, and institutional guidelines, were obtained to enrich the contextual understanding and triangulate quantitative findings.

### 2.7. Instrument Validity and Reliability

Construct validity was tested using Pearson's product-moment correlation. With degrees of freedom ( $df = N - 2 = 73 - 2 = 71$ ), the critical value was  $r_{table} = 0.246$ . All items for both variables demonstrated  $r_{calculated}$  values above the threshold, indicating satisfactory validity. Reliability was tested using Cronbach's Alpha. Principal's effective communication scale:  $\alpha > 0.741$ , and teacher performance scale:  $\alpha > 0.700$ . These values exceed the commonly accepted minimum threshold of 0.70, confirming internal consistency of the measurement instruments.

### 2.8. Data Analysis

Data analysis was performed using SPSS through a series of systematic procedures, beginning with assumption testing that included a normality test to assess data distribution and a linearity test to verify that the relationship between variables met the required linear assumptions. Following this stage, inferential analysis was conducted using simple linear regression to assess the predictive effect of the principal's effective communication on teacher performance, and a t-test was used to determine the statistical significance of the predictor variable. Additionally, the coefficient of determination ( $R^2$ ) was examined to identify the proportion of variance in teacher performance explained by principal communication. Collectively, this analytical strategy provided a comprehensive evaluation of both the strength and significance of the hypothesized relationship.

## 3. RESULT AND DISCUSSION

### 3.1. Result

The analysis revealed a significant, positive influence of the principal's effective communication on the educational staff's performance at SMK Farmasi Ikasari Pekanbaru. Data collected from 73 teachers in July 2024 were analyzed using simple linear regression to test the proposed hypothesis. The results show that principal communication significantly predicts teacher performance, with a t-value of 2.918 and a significance level of 0.005 ( $p < 0.05$ ). The standardized coefficient ( $\beta = 0.327$ ) indicates a moderate positive effect, demonstrating that improvements in principal communication correspond with increases in teacher performance levels.

Table 1: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	118.823	8.725		13.619	.000
	Principal Effective Communication (X)	.312	.107	.327	2.918	.005

a. Dependent Variable: Educational Staff Performance (Y)

The model summary indicates that the coefficient of determination ( $R^2 = 0.714$ ) explains 71.4% of the variance in teacher performance, with the remaining 28.6% attributed to factors outside the model. These findings confirm the strong predictive contribution of communication-related leadership practices in shaping

staff performance outcomes. Descriptive responses from teachers also support these statistical findings, highlighting the importance of clarity, constructive feedback, and the principal's two-way communication.

Table 2: Model Summary for Simple Linear Regression

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.845 <sup>a</sup>	.714	.710	.58916

a. Predictors: (Constant), Principal Effective Communication (X)

The high R value (0.845) reflects a strong correlation between the principal's effective communication and teacher performance. The significance value ( $p = 0.005$ ) further confirms that the effect is statistically meaningful. These findings suggest that effective communication practices—such as message clarity, empathetic interaction, and constructive feedback—play a decisive role in enhancing teacher motivation, instructional quality, and overall work productivity.

### 3.2. Discussion

The findings of this study demonstrate that the principal's effective communication has a strong, significant influence on the performance of educational staff at SMK Farmasi Ikasari Pekanbaru. The regression results ( $\beta = 0.327$ ;  $p = 0.005$ ) confirm that communication functions not only as a managerial tool but also as a strategic leadership mechanism that shapes teacher motivation, task execution clarity, and overall productivity. This aligns with the argument by Bush and Ng (2019) that communication is a central pillar of instructional leadership, enabling school leaders to articulate expectations, foster shared understanding, and guide teachers toward organizational goals. The study by Printy and Marks (2006) shows that open, respectful communication among colleagues can improve teacher learning and student achievement. According to Cale et al. (2015), effective school leaders use communication to guide and support teachers in achieving organisational goals. This includes providing constructive feedback, coordinating teaching activities, and facilitating professional development.

The strong correlation ( $R = 0.845$ ) observed in this study reinforces previous evidence that communication-oriented leadership can significantly enhance teacher performance. Leithwood et al. (2020) emphasize that effective leaders communicate vision, provide continuous feedback, and establish trust—factors that directly affect teacher commitment and teaching quality. Consistent with these findings, teachers in this study perceived that two-way communication, message clarity, and constructive feedback from the principal created a positive work atmosphere that boosted their motivation and engagement.

The determination coefficient ( $R^2 = 0.714$ ) indicates that 71.4% of teacher performance is influenced by headteacher communication. This proportion is notably higher than that reported in related studies. For instance, Lijuan and Hallinger (2016) found that communication accounted for approximately 40–50% of the variance in teacher performance in Malaysian secondary schools, suggesting that communication may have an even more substantial effect in more centralized or hierarchical school cultures such as Indonesia's. This implies that the cultural context where teachers tend to rely heavily on the leader's guidance may amplify the impact of headteacher communication on performance.

The results also correspond with organizational communication theory, which explains that communication affects not only information flow but also emotional climate, sense of belonging, and professional identity (Robbins & Judge, 2009). In this study, teachers felt valued and supported when communication was clear, empathetic, and participative. Similar results were reported by Zivkovic (2022), who found that empathetic school leadership communication significantly enhanced teacher morale and reduced burnout, especially in high-demand educational environments.

The findings also affirm dimensions of transformational leadership, particularly the role of inspirational communication in strengthening teacher motivation and performance. According to Hallinger et al. (2020), leaders who excel in communication are better able to align teacher behavior with school goals, promote collaboration, and inspire innovation. The pattern observed in this study, where teachers are more motivated when communication is frequent, open, and appreciative, supports this theoretical perspective.

Despite the strong effects identified, 28.6% of the variance in teacher performance remains unexplained, suggesting the presence of additional influential factors, such as workload, professional development opportunities, school culture, and teacher self-efficacy. Prior research by Skaalvik and Skaalvik (2023) highlights that teacher well-being, autonomy, and perceived support also contribute significantly to performance. Integrating these additional variables in future studies could yield a more comprehensive understanding of school performance dynamics.

Overall, the results highlight the strategic importance of communication-based leadership in vocational school contexts. Given that vocational education requires strong coordination, clarity of instructional standards, and consistent supervision, principal communication becomes an essential driver of teacher effectiveness. These findings support the global emphasis on quality education and strong institutions, underscoring the importance of effective leadership and robust communication mechanisms in improving educational outcomes.

### 3 CONCLUSION

This study concludes that the principal's effective communication plays a significant role in enhancing educational staff performance, demonstrating a strong predictive relationship that underscores communication as a critical component of school leadership effectiveness. These findings carry important implications for policy and practice, suggesting that schools should strengthen leadership development programs that focus on interpersonal communication, clear feedback, and collaborative dialogue to foster higher staff productivity and organizational cohesion. At the policy level, educational authorities are encouraged to integrate communication competence as a core indicator in leadership selection, evaluation, and professional development frameworks. Despite its contributions, the study is limited by its single-site context and reliance on quantitative self-report data, which may constrain generalizability and overlook deeper contextual dynamics. Future research should therefore expand to multi-school or cross-regional samples, employ mixed-methods designs to capture richer qualitative insights, and explore additional leadership variables such as transformational leadership or organizational culture that may interact with communication to influence staff performance.

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