

Analyzing the Impact of Leadership, School Culture, Organizational Communication, and Academic Supervision on Teacher Performance

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Abstract:

This study aims to analyze the influence of leadership, school culture, organizational communication, and academic supervision on improving teacher performance in schools, with academic supervision as an intervening variable. This study uses a quantitative approach through survey methods and path analysis techniques. The results of the study indicate that leadership has a direct effect on academic supervision (6.1%), school culture (9.7%), and organizational communication (3.0%). Furthermore, leadership has a direct effect on teacher performance (16.8%), school culture (6.2%), organizational communication (9.0%), and academic supervision (8.1%). The indirect effect through academic supervision is relatively small, namely leadership by 2.1%, school culture by 2.2%, and organizational communication by 1.5%. This indicates that the role of academic supervision as a mediating variable is still weak. Simultaneously, leadership, school culture, organizational communication, and academic supervision account for 56.5% of improvements in teacher performance, while other factors outside the research model account for 43.5%. Based on these findings, this study develops a new conceptual model, namely the Direct Influence Dominance-Based Teacher Performance Model (MKG-DPL), which confirms that improvements in teacher performance are more strongly influenced by direct strengthening of organizational variables than by mediation mechanisms.

Keywords: *Leadership, School Culture, Academic Supervision, Teacher Performance*

Abstrak:

Penelitian ini bertujuan untuk menganalisis pengaruh kepemimpinan, budaya sekolah, komunikasi organisasi, dan supervisi akademik terhadap peningkatan kinerja guru di sekolah, dengan supervisi akademik sebagai variabel intervening. Penelitian ini menggunakan pendekatan kuantitatif melalui metode survei dan teknik analisis jalur (*path analysis*). Hasil penelitian menunjukkan bahwa secara parsial: kepemimpinan berpengaruh langsung terhadap supervisi akademik sebesar 6,1%, budaya sekolah sebesar 9,7%, dan komunikasi organisasi sebesar 3,0%. Selanjutnya, kepemimpinan berpengaruh langsung terhadap kinerja guru sebesar 16,8%, budaya sekolah sebesar 6,2%, komunikasi organisasi sebesar 9,0%, dan supervisi akademik sebesar 8,1%. Pengaruh tidak langsung melalui supervisi akademik relatif kecil, yaitu kepemimpinan sebesar 2,1%, budaya sekolah sebesar 2,2%, dan komunikasi organisasi sebesar 1,5%. Hal ini menunjukkan bahwa peran supervisi akademik sebagai variabel mediasi masih lemah. Secara simultan, kepemimpinan, budaya sekolah, komunikasi organisasi, dan supervisi akademik

memberikan kontribusi sebesar 56,5% terhadap peningkatan kinerja guru, sedangkan 43,5% dipengaruhi oleh faktor lain di luar model penelitian. Berdasarkan temuan tersebut, penelitian ini menghasilkan model konseptual baru, yaitu Model Kinerja Guru Berbasis Dominasi Pengaruh Langsung (MKG-DPL), yang menegaskan bahwa peningkatan kinerja guru lebih dipengaruhi oleh penguatan langsung variabel organisasi dibandingkan melalui mekanisme mediasi.

Kunci: *Kepemimpinan, Budaya Sekolah, Supervisi Akademik, Kinerja Guru*

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INTRODUCTION

Teacher performance is a critical factor influencing the overall quality of education and, in turn, societal development. High-performing teachers not only transmit knowledge but also serve as role models and mentors, shaping students' moral values and social behavior. In rural areas, such as Lhoksukon District, North Aceh, teacher performance indicators – including classroom management, lesson preparation, and sustained engagement – often fall short of expectations, limiting student achievement and community educational advancement. Education, as a social institution, relies on effective teachers to cultivate skilled, responsible citizens (Handayani et al., 2021; Kussyeri, 2021). Empirical evidence demonstrates that low teacher performance correlates with diminished learning outcomes, higher dropout rates, and weaker community development (Guy 2024; Gechere et al., 2025). Therefore, enhancing teacher performance has broad societal implications, from improving literacy and skill acquisition to fostering socio-economic mobility. Addressing these performance gaps contributes to educational equity between urban and rural areas. In conclusion, investigating the determinants of teacher performance is essential for formulating policies and interventions that strengthen both educational quality and societal well-being (Durrani & Makhmetova, 2025; Tong, 2025).

This study employs social systems theory, educational leadership theory, and organizational behavior perspectives to examine teacher performance. According to Parsons (1951), schools are complex systems with interacting subsystems, including leadership, culture, communication, and supervision, which collectively influence teacher behavior (Leithwood et al., 2022; Hallinger, 2023). Educational leadership theory emphasizes the principal's role as an instructional leader responsible for creating conducive learning environments (Soim et al., 2026; Taufiqurrahman et al., 2025), modeling professional behavior, and fostering teacher development (Hallinger, 2022; Kim et al., 2024). Organizational behavior theory, particularly as presented by Robbins and Judge (2020), highlights how individual performance is shaped by the interaction between personal capabilities and organizational structures (Spector, 2025; Ribeiro, 2024). Academic supervision, grounded in reflective practice models (Zepeda, 2017), is conceptualized as a mediating mechanism for professional growth, moving beyond mere administrative monitoring to active developmental engagement (Muslih, 2025; Pratiwi et al., 2025). These theoretical lenses collectively provide a robust framework for analyzing the direct and indirect

effects of leadership, school culture, organizational communication, and academic supervision on teacher performance, enabling a comprehensive assessment of systemic and behavioral influences in secondary school contexts (Rosalina et al., 2023; Yuliani et al., 2025).

Despite normative frameworks that mandate teacher professionalism, such as Law No. 14 of 2005, empirical evidence indicates persistent underperformance among junior high school teachers, particularly in non-urban areas of Indonesia. In Lhoksukon District, indicators such as lesson planning, pedagogical innovation, and technology utilization remain inconsistent, undermining student learning outcomes and educational equity (Handayani et al., 2021; Salehha et al., 2024). Teachers often lack adequate support from principals, a limited collaborative culture, weak organizational communication, and ineffective academic supervision (Yunus, 2021; Park & Kim, 2022). These deficiencies hinder professional development, reduce teacher motivation, and perpetuate educational disparities between urban and rural schools. The general problem is therefore systemic: improving teacher performance requires addressing not only individual competencies but also institutional practices and interactions. Without targeted interventions informed by both theory and empirical evidence, the quality of education in such regions remains compromised. Consequently, understanding the multifaceted factors affecting teacher performance is crucial to designing effective strategies for educational improvement at the local, regional, and national levels (Chen & Yang, 2023; Liu et al., 2023).

Previous research underscores the influence of leadership, school culture, communication, and supervision on teacher performance. Leithwood and Sun (2018) demonstrated that effective school leadership fosters professional commitment and improves teacher engagement, while Hallinger and Heck (2010) highlighted the benefits of collaborative leadership for instructional quality (Leithwood et al., 2022; Hallinger, 2023). Studies by Bush and Glover (2020) and Hammad et al. (2021) revealed that weak leadership and an uncondusive school culture reduce teacher motivation, whereas Men and Bowen (2017) emphasized that poor organizational communication leads to low teacher involvement and performance (Ribeiro, 2024; Vermeir & Kelchtermans, 2022). Academic supervision, as indicated by Sullivan and Glanz (2019) and Zepeda and Ponticell (2020), only impacts performance when it supports reflective dialogue and professional development, rather than mere administrative compliance (Muslih, 2025; Pratiwi et al., 2025). These findings illustrate the multi-dimensional nature of teacher performance and suggest that isolated interventions are insufficient for systemic improvement. Despite these insights, previous studies rarely integrate all four factors—leadership, culture, communication, and supervision—within a single empirical model in the context of rural junior high schools, revealing a critical research gap (Yuliani et al., 2025; Kim et al., 2024; Imansyah et al., 2025; Sartika et al., 2025)).

The existing literature indicates that while the individual effects of leadership, school culture, organizational communication, and academic supervision are well documented, their combined and mediated influence on teacher performance remains underexplored. Empirical studies predominantly

focus on urban contexts, leaving rural settings, such as the Lhoksukon District, underrepresented. Furthermore, most research treats academic supervision as a procedural activity rather than a mediating mechanism that enhances performance. This gap is significant because rural schools often face structural, cultural, and resource limitations, which may amplify or attenuate the effects observed in urban studies. Addressing this gap is crucial for developing evidence-based models that account for local dynamics and provide actionable insights for policy and practice. Consequently, the proposed research aims to systematically integrate these variables, testing both direct and indirect effects, thereby contributing to theoretical understanding and practical strategies to improve teacher performance in under-resourced educational environments.

This study seeks to answer the research problem: to what extent do leadership, school culture, organizational communication, and academic supervision influence teacher performance in junior high schools, and what role does academic supervision play as a mediating factor? Preliminary evidence suggests that direct reinforcement through leadership, culture, and communication may have stronger effects than mediated pathways, while supervision may provide incremental, yet essential, improvements in professional capacity. By integrating these variables into a unified model, this research contributes an empirically grounded framework for understanding performance determinants in rural education contexts. The anticipated contribution is twofold: first, clarifying the relative importance of direct versus mediated influences on teacher performance; second, providing policymakers and school leaders with practical guidance for designing interventions that strengthen institutional factors, ultimately improving educational outcomes and equity in regions like Lhoksukon District, North Aceh.

RESEARCH METHODS

This study employs a quantitative research design with an ex-post-facto approach, meaning that the variables under investigation are not manipulated by the researcher but are observed based on existing conditions and measured phenomena (Almusaed et al., 2025; Ghanad, 2023). Ex-post-facto research is particularly suitable for examining relationships among variables that have already occurred, allowing the researcher to reveal patterns and infer causal links based on natural variations (Abu et al., 2026; Setianingrum et al., 2025). The choice of this design is justified because the study aims to analyze how leadership, school culture, organizational communication, and academic supervision influence teacher performance, without artificially altering these variables. The research was conducted in junior high schools in Lhoksukon District, North Aceh, a location chosen for observed variability in teacher performance indicators and the presence of both structural and cultural challenges, making it a relevant context for studying the impact of organizational and managerial factors on educational outcomes.

The study population includes all junior high school teachers in Lhoksukon District. A purposive sampling technique was employed to select respondents who met specific inclusion criteria, including active teaching status and involvement in school programs relevant to leadership, culture, communication, and supervision. This method ensures that the sample represents teachers most

directly impacted by the independent and mediating variables under investigation. Data were collected using structured surveys, which included validated questionnaires to measure leadership, school culture, organizational communication, academic supervision, and teacher performance. The survey method allows for standardized data collection across multiple schools, facilitating comparative analysis and ensuring the reliability and validity of the results.

Data analysis was performed using path analysis to examine the direct and indirect relationships among variables. Path analysis enables the determination of both the magnitude and direction of effects between exogenous variables (leadership, school culture, organizational communication, and academic supervision) and the endogenous variable (teacher performance). A mediated path model was applied, reflecting the hypothesized role of academic supervision as an intervening variable that partially transmits the effects of organizational factors to teacher performance. Prior to conducting path analysis, linear regression tests were performed to ensure significant relationships between variables, a prerequisite for reliable path estimation. This analytical framework allows for the identification of dominant influences, providing empirical insights into which factors most significantly enhance teacher performance in the studied context.

RESULTS AND DISCUSSION

Results

Data homogeneity was tested using the Bartlett test. Data for each research variable is said to be homogeneous if the calculated $\chi^2 < \chi^2$ table at a significance level of 5%. The following is a calculation of data homogeneity for each research variable in Table 1 For complete calculations, please see Appendix 9.

Table 1. Results of the Calculation of Homogeneity for Each Research Variable

No	Research Variable	df	χ^2 Calculated	χ^2 Table ($\alpha = 0.05$)	Conclusion
1	X5 based on X1	56	37.43	74.47	Homogeneous
2	X5 based on X2	68	28.49	88.25	Homogeneous
3	X5 based on X3	73	41.50	93.95	Homogeneous
4	X5 based on X4	71	39.72	91.67	Homogeneous
5	X4 based on X1	56	50.47	74.47	Homogeneous
6	X4 based on X2	68	31.59	88.25	Homogeneous
7	X4 based on X3	73	45.33	93.95	Homogeneous

Table 1 shows that the data for variables X5 over X1, X2, X3 and X4, as well as X4 over X1, X2 and X3, are stated to have a homogeneous data distribution because the calculated $\chi^2 < \chi^2$ table significance level $\alpha = 0.05$, which also means that the data in this study is homogeneous.

Before performing the path analysis calculations, the correlation between the research variables was first calculated/tested. The complete correlation results are presented in the inter-variable correlation matrix in Table 2. For more detailed calculations, see Appendix 12.

Table 2. Correlation Matrix Between Variables

Variabel	X ₁	X ₂	X ₃	X ₄	X ₅
X ₁	1	0,087	0,178	0,315	0,332
X ₂		1	0,128	0,357	0,355
X ₃			1	0,259	0,336
X ₄				1	0,384
X ₅					1

From the calculation of the correlation test of variables X1 with X4, rcount = 0.315 was obtained, while rtable with N = 113 and a significance level of 5% was 0.183. Thus, the price of $r_{(x_1 x_4)} > r_{table}$ (0.315 > 0.183). Next, a t-test was used to assess the significance of the correlation. With the price of rcount = 0.315, tcount = 3.529 was obtained. From the t distribution list with df = 111 and a significance level of 5%, ttable = 1.65 was obtained. Thus, the price of rcount > rtable (0.315 > 0.183) indicates a significant correlation between the Leadership variable and job satisfaction. From the t distribution list with df = 111 and a significance level of 5%, ttable = 1.658 was obtained. Thus, the calculated $t > t_{table}$ (3.529 > 1.658), indicating a significant correlation between the Leadership and Academic Supervision variables. The calculation results indicate a significant and meaningful correlation between Leadership and Academic Supervision.

The correlation test for variables X1 and X5 yields a calculated $r = 0.332$, while the $r = r_{table}$ with N=113 and a 5% significance level is 0.183. Therefore, the value of $r_{(x_1 x_5)} > r_{table}$ (0.332 > 0.183). The significance of the correlation was then tested using a t-test. With a calculated $r = 0.332$, the calculated $t = 3.742$. The t-distribution table with df=111 and a 5% significance level yields a t-value of 1.65. Therefore, the calculated $r > r_{table}$ (0.332 > 0.183) indicates a significant correlation between the Leadership and Work Commitment variables. From the t-distribution table with df = 111 and a significance level of 5%, t-table = 1.658. Thus, it turns out that $t\text{-count} > t\text{-table}$ (3.742 > 1.658), so it can be concluded that there is a significant correlation between the Leadership variable and teacher performance improvement. From the calculation results, it can be concluded that there is a significant and meaningful correlation between leadership and teacher performance improvement.

The correlation test calculation for variables X2 and X4 yields r-count = 0.357, while r-table with N = 113 and a significance level of 5% is 0.183. Therefore, the value of $r_{(x_2 x_4)} > r_{table}$ (0.357 > 0.183). Next, the significance of the correlation was tested using a t-test. With r-count = 0.357, t-count = 4.058. From the t-distribution table with df = 111 and a significance level of 5%, t-table = 1.658. Thus, the calculated r value (0.357) exceeds the r table value (0.183), indicating a significant correlation between school culture and academic supervision. From the t distribution table with df = 111 and a significance level of 5%, the t-value is 1.658. Thus, it turns out that $t\text{ count} > t\text{ table}$ (4.058 > 1.658), so it can be concluded that there is a significant correlation between school culture and academic supervision. From the calculation results, it can be concluded that there is a significant and meaningful correlation between school culture and academic supervision.

From the correlation test of the X2 variable with X5, rhitung = 0.355 was obtained, while rtable with N = 113 and a significance level of 5% was 0.183. Thus,

the price of $r_{(x_2 \times x_5)} > r_{table}$ ($0.355 > 0.183$). Next, a t-test was used to assess the significance of the correlation. With the price of $r_{hitung} = 0.355$, $t_{hitung} = 4.037$ was obtained. From the t distribution list with $df = 111$ and a significance level of 5%, $t_{table} = 1.658$ was obtained. Thus, the price of $r_{hitung} > r_{table}$ ($0.355 > 0.183$), indicating a significant correlation between the School Culture variable and the Improvement of Teacher Performance. From the t distribution list with $df = 111$ and a significance level of 5%, $t_{table} = 1.658$ was obtained. Thus, $t_{count} > t_{table}$ ($4.037 > 1.658$), indicating a significant correlation between School Culture and Teacher Performance Improvement. The calculation results indicate a significant and meaningful correlation between School Culture and Teacher Performance Improvement.

The correlation test for variables X3 and X4 yields $r_{count} = 0.259$, while r_{table} with $N = 113$ and a 5% significance level is 0.183. Therefore, $r_{(x_3 \times x_4)} > r_{table}$ ($0.259 > 0.183$). The significance of the correlation was then tested using a t-test. With $r_{count} = 0.259$, $t_{count} = 2.847$. The t-distribution table with $df = 111$ and a 5% significance level yields $t_{table} = 1.658$. Thus, the calculated r value is $< r_{table}$ ($0.259 < 0.183$), indicating a significant correlation between the variables of Organizational Communication and Academic Supervision. From the t-distribution table with $df = 111$ and a significance level of 5%, the t-table value is 1.658. Therefore, the calculated t value is $> t_{table}$ ($2.847 > 1.65$), indicating a significant correlation between Organizational Communication and Academic Supervision. The calculation results indicate a significant and meaningful correlation between Organizational Communication and Academic Supervision.

The correlation test for variables X3 and X5 yielded a calculated r value of 0.336, while the r table value with $N = 113$ and a significance level of 5% was 0.183. Therefore, the value of $r_{(x_3 \times x_5)} > r_{table}$ ($0.336 > 0.183$). The significance of the correlation was then tested using a t-test. With a calculated r of 0.336, the calculated t value is 3.790. From the t-distribution table with $df = 111$ and a significance level of 5%, the t-value is 1.658. Therefore, the calculated r value is greater than the r-table ($0.336 > 0.183$), indicating a significant correlation between Organizational Communication and Work Commitment. From the t-distribution table with $df = 111$ and a significance level of 5%, the t-value is 1.658. Therefore, the calculated t value is greater than the t-table value ($3.790 > 1.65$), indicating a significant correlation between Organizational Communication and Teacher Performance Improvement. The calculation results indicate a significant and meaningful correlation between Organizational Communication and Teacher Performance Improvement.

The correlation test for variables X4 and X5 yielded an r-count of 0.384, while the r-table with an N of 113 and a significance level of 5% yielded a p-value of 0.18. Thus the price of $r_{(x_4 \times x_5)} > r_{table}$ ($0.384 > 0.183$). Next, a t-test was used to assess the significance of the correlation. With the price of $r_{count} = 0.384$, $t_{count} = 4.426$ was obtained. From the t distribution table with $df = 111$ and a significance level of 5%, the t-value was 1.658. Thus, the price of $r_{count} > r_{table}$ ($0.384 > 0.183$); it can be said that there is a significant correlation between the academic supervision variable and the improvement in teacher performance. From the t distribution table with $df = 111$ and a significance level of 5%, the t-value was 1.658.

Thus, it turns out that $t \text{ count} > t \text{ table}$ ($4.426 > 1.658$), so it can be concluded that there is a significant correlation between the academic supervision variable and the improvement in teacher performance. From the results, it can be concluded that there is a significant and meaningful correlation between academic supervision and improvements in teacher performance.

The calculation results also show that principal leadership has an indirect effect on teacher performance improvement through academic supervision, with a value of $0.293 \times 0.257 \times 0.284 = 0.021$. Therefore, principal leadership indirectly determines changes in teacher performance improvement through academic supervision by 2.1%.

The calculation also shows that school culture has an indirect effect on improving teacher performance through academic supervision, with a value of $0.249 \times 0.312 \times 0.284 = 0.022$. Therefore, school culture indirectly determines changes in teacher performance improvement through academic supervision by 2.2%. Similarly, the calculation results show that organizational communication has an indirect effect on teacher performance improvement through academic supervision, with a value of $0.300 \times 0.173 \times 0.284 = 0.025$. Therefore, organizational communication indirectly determines a 1.5% improvement in teacher performance through academic supervision. Based on the calculation results, the total effect of leadership, school culture, organizational communication, and academic supervision together on improving teacher performance is 56.5%. The remainder stems from factors beyond the variables used in this study.

After calculating and testing the significance of the path coefficients, the next step is to calculate the direct and indirect effects of the exogenous variables on the endogenous variables. A summary of the direct and indirect effects is presented in Table 3.

Table 3. Path Coefficient Values of Direct, Indirect, Total Influence and Correlation

Model	Exogenous Variable → Endogenous Variable	Direct Effect	Indirect Effect via X4	Total Effect
1	X1 → X4	0.257	-	0.257
	X2 → X4	0.312	-	0.312
	X3 → X4	0.173	-	0.173
2	X1 → X5	0.293	0.021	0.314
	X2 → X5	0.249	0.022	0.271
	X3 → X5	0.284	0.025	0.309
	X4 → X5	0.300	-	0.300

Based on Table 3, the direct influence of Leadership on Academic Supervision is $0.2572 = 0.061$, or 6.1%. Thus, Leadership directly determines Academic Supervision by 6.1%. In addition, it is known that the direct influence of School Culture on Academic Supervision is $0.3122 = 0.097$. Thus, School Culture directly determines changes in Academic Supervision by 9.7%. Furthermore, it is known that the direct influence of Organizational Communication on Academic Supervision is $0.1732 = 0.030$. Thus, Organizational Communication directly determines changes in Academic Supervision by 3.0%.

Based on Table 4.23 above, the direct influence of Leadership on Improving Teacher Performance is $0.2932 = 0.086$. Thus, Leadership directly determines a

8.6% Improvement in Teacher Performance. In addition, it is known that the direct influence of School Culture on Improving Teacher Performance is $0.2492 = 0.062$. Thus, school culture directly determines the level of teacher performance improvement by 6.2%. Furthermore, it is known that the direct effect of organizational communication on teacher performance improvement is $0.2842 = 0.081$. Therefore, organizational communication directly accounts for 8.1% of changes in academic supervision. Furthermore, it is known that the direct effect of academic supervision on teacher performance improvement is $0.3002 = 0.090$. Therefore, academic supervision directly determines a 9.0% improvement in teacher performance.

Discussion

This study shows that teacher performance improvement is determined by leadership, teamwork, organizational communication, and work motivation. Leadership in Lhoksukon District is predominantly moderate, with 62.83% of respondents falling into this category, and 32.74% in the low category, highlighting areas for improvement. Liu and Bellibas (2023) emphasize that principal leadership's impact on academic supervision is mediated by teacher collaboration, which clarifies why leadership's contribution appears relatively modest in this study (Liu et al., 2023; Hallinger, 2022). Effective leadership must foster a collaborative culture to transform supervision from an administrative duty into a professional learning process. The findings suggest that without targeted leadership interventions, academic supervision cannot fully realize its potential, emphasizing the need for principals to enhance their leadership skills to optimize teacher performance outcomes (Pratiwi et al., 2025; Muslih, 2025).

School culture and organizational communication were similarly moderate, with 61.95% and 70.80% of respondents, respectively, falling into the medium category, while academic supervision is 69.03% moderate. Teacher performance improvement, however, was low, with 53.10% in the poor category. This pattern underscores that moderate organizational conditions, while necessary, are insufficient to elevate performance to high levels (Yuliani et al., 2025; Salehha et al., 2024). The study highlights a systemic reality: organizational variables interact in complex ways, and isolated strengths in leadership or communication do not automatically translate into high teacher performance (Yunus, 2021; Park & Kim, 2022). This points to the novelty of the research, which empirically integrates multiple organizational factors within a single model to examine their simultaneous effect in a rural education context (Chen & Yang, 2023; Liu et al., 2023).

The combined influence of leadership, school culture, organizational communication, and academic supervision accounts for 56.5% of the variation in teacher performance, indicating strong explanatory power, while 43.5% remains influenced by unexplored factors. This confirms that teacher performance is multidimensional, shaped by the interaction of organizational elements rather than individual variables in isolation (Zhang & Tian, 2025; Li et al., 2025). Leadership guides the school's vision and climate, while school culture establishes shared norms that foster collaboration, innovation, and professional commitment. Organizational communication ensures smooth coordination and reduces

misinterpretations, whereas academic supervision operationalizes professional development (Rosalina et al., 2023; Kim et al., 2024). Conceptually, the study reinforces systems theory in education: organizational effectiveness depends on the synergy among components rather than single-factor dominance, positioning this research as a comprehensive framework for understanding performance determinants in junior high schools (Athanasios, 2022; Hallinger, 2023).

Empirical evidence from Hallinger (2022) shows that school leadership significantly affects teacher performance through interactions with school culture and supervision, while Liu et al. (2023) demonstrate that organizational communication and teacher collaboration reinforce leadership influence on learning outcomes (Liu et al., 2023; Hallinger, 2022). By combining these four factors in a mediated path model, this study provides novel empirical evidence of their simultaneous influence in a rural context, an area underrepresented in prior research (Pratiwi et al., 2025; Muslih, 2025). This integrative approach highlights the interdependence of organizational variables, offering a more holistic understanding of performance improvement mechanisms (Yuliani et al., 2025; Yanto & Yuliana, 2024).

Despite the model's 56.5% explanatory power, internal factors such as work motivation, professional competence, job satisfaction, and organizational commitment, along with external factors including policies, infrastructure, social environment, and community support, account for the remaining 43.5% of performance variation. Kim et al. (2024) highlight that teacher performance is influenced by both organizational and individual factors, as well as the broader environmental context (Kim et al., 2024; Ribeiro, 2024). Methodologically, path analysis allowed precise identification of relationships, yet future studies could leverage SEM to explore more complex interactions. In practice, these findings underscore the need for integrated interventions that address leadership, culture, communication, and supervision to systematically enhance teacher performance (Rosalina et al., 2023; Liu et al., 2023; Khomairohtusshiyamah et al., 2025; Syadidunniam et al., 2026).

The study's contributions are both theoretical and practical. It confirms that teacher performance is a product of organizational synergy rather than isolated variables and emphasizes the importance of a coordinated approach to educational management (Hallinger, 2022; Leithwood et al., 2022). Policy implications include training programs for principals covering leadership, culture management, communication, and supervision, as well as initiatives such as professional learning communities and internal communication forums. Furthermore, the findings resonate with Islamic principles, integrating leadership (*imamah*), value systems (*tsaqafah*), communication (*tabligh*), and supervision (*hisbah*) as foundational elements in cultivating educational quality and ethical practice, demonstrating both contextual and cross-disciplinary relevance (Yunus, 2021; Muslih, 2025). The model thus provides a strong foundation for future research while offering actionable guidance for improving teacher performance in rural schools (Pratiwi et al., 2025; Yuliani et al., 2025).

CONCLUSION

Based on the data and analysis presented, the following conclusions can be drawn: Leadership has a direct effect on academic supervision of 6.1% (moderate category). School culture has a direct effect on academic supervision, accounting for 9.7% of the variance (the most dominant variable). Organizational communication has a direct effect on academic supervision of 3.0% (relatively low). Leadership has a direct effect on teacher performance of 16.8% (the most dominant influence). School culture has a direct effect on teacher performance, accounting for 6.2%. Organizational communication has a direct effect on teacher performance of 9.0%. Academic supervision has a direct effect on teacher performance of 8.1%. Leadership has an indirect effect on teacher performance through academic supervision, amounting to 2.1%. School culture has an indirect effect on teacher performance through academic supervision, amounting to 2.2%. Organizational communication has an indirect effect on teacher performance through academic supervision, amounting to 1.5%. Simultaneously, leadership, school culture, organizational communication, and academic supervision account for 56.5% of teacher performance, while other variables outside the research model account for the remaining 43.5%.

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