



Academic Supervision and Principal Managerial Competence as Determinants of Teacher Performance: Evidence from SMA Negeri 1 Soreang

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Abstract

Background: Teacher performance is closely linked to instructional quality, and school leadership may shape it through academic supervision and managerial practice.

Objective: This study examines whether academic supervision and the principal's managerial competence are associated with teacher performance at SMA Negeri 1 Soreang.

Methods: A quantitative correlational survey collected 1–4 Likert-scale responses from 19 purposively selected teachers. Descriptive statistics, assumption tests, correlations, and simple and multiple regression analyses were conducted using IBM SPSS Statistics 29.

Results: Academic supervision explained 76.4% of the variance in teacher performance, while managerial competence explained 72.2%. Their joint model was significant ($F = 25.970$, $p < .05$) and accounted for 76.4% of the variance. Because the two predictors were highly correlated, partial findings are interpreted cautiously.

Conclusion: Teachers appear to experience supervision and managerial leadership as interconnected features of principal leadership. Schools should strengthen classroom-focused supervision, feedback, and managerial support as complementary improvement practices.

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INTRODUCTION

Education develops learners' capacities to participate independently and responsibly in social life. Within schools, teacher performance is a direct condition of instructional quality, while academic supervision and principals' managerial work can create the support systems through which that performance is sustained (Wijayanti, 2023). This study therefore considers teacher performance together with the leadership practices that may enable professional improvement.

Indonesia's 2024 Human Development Index was 75.02, a result that continues to focus attention on the contribution of schools to human development (Statistik, 2024). Improving the quality of classroom practice is one pathway through which schools can respond. Teacher performance matters in this process because it shapes how curriculum, assessment, and learner support are translated into daily instruction.

International scholarship treats school leadership as an indirect but consequential influence on learner outcomes, largely because leaders shape the conditions in which teachers work (Hallinger, 2018; Leithwood et al., 2020; Yulianti et al., 2026). Recent meta-analyses likewise show that leadership effects depend on culture, policy, organisational arrangements, and instructional processes (Pietsch et al., 2025; Tan et al., 2024). Such evidence supports examining leadership mechanisms within a specific school rather than assuming that cross-system findings apply uniformly to every setting.

Teacher performance encompasses the professional enactment of planning, teaching, guiding, assessing, and evaluating learning. It may be affected by how principals organise resources, establish expectations, and provide instructional support. In practice, limited time, competing administrative demands, and uneven managerial capacity can constrain the quality of academic supervision and weaken teachers' opportunity to receive useful feedback (Parveen et al., 2022).

Academic supervision is intended to assist teachers in improving instruction, not simply to audit compliance (Daresh, 1989; Glickman et al., 2007; Xu et al., 2024). Recent work describes it as a cyclical process of observation, feedback, and follow-up that supports teaching quality (Julianda et al., 2024; Sugiar et al., 2025). Managerial competence complements this role by enabling principals to coordinate personnel, programmes, facilities, and the broader school climate required for professional learning.

Earlier studies generally report positive links between these leadership dimensions and teacher performance. Academic supervision has been associated with stronger performance and more useful professional feedback (Handayani et al., 2022; Wulandari & Juharyanto, 2021), while managerial competence has been linked to work conditions that enable teachers to perform effectively (Nugroho et al., 2023; Sari et al., 2023). However, effect sizes and interpretations vary across school levels, locations, and study designs.

Studies that model supervision and managerial competence together suggest that the two are related but not fully independent. Muttaqin et al. (2023) found that both contributed to teacher performance alongside teacher empowerment and commitment, while Munacia et al. (2024) identified related effects involving school culture. This overlap is theoretically meaningful but also creates a methodological concern: when teachers view both constructs as aspects of one principal's leadership, their statistical separation may be difficult.

The present study focuses on SMA Negeri 1 Soreang to examine how teachers within one organisational setting perceive academic supervision, managerial competence, and their own performance. It tests the separate and combined associations of the two leadership variables with teacher performance. The study also provides practical evidence for strengthening school-based feedback, professional support, and management within a coherent leadership approach.

METHOD

A quantitative correlational survey was used to investigate predictive relationships among academic supervision, principal managerial competence, and teacher performance. Academic supervision (X1) and managerial competence (X2) were specified as predictors, while teacher performance (Y) was the outcome. The design estimates statistical associations and does not establish causality. Quantitative, qualitative, and R&D research methods (Sugiyono, 2013, 2025).

The research took place at SMA Negeri 1 Soreang in Bandung Regency. Teachers constituted the population. Purposive recruitment retained responses from teachers at the school, and one duplicate entry was removed; the analytical sample therefore comprised 19 respondents. This small, site-specific sample limits external generalisation.

Data were collected through a Google Forms questionnaire using a four-point Likert response scale. The indicator structure for academic supervision, managerial competence, and teacher performance is reported in Table 1.

Table 1

Research Instrument Grid

Variable	Dimensions/Indicators	No. of Items
Academic Supervision (X1)	Planning; implementation; follow-up of supervision	12
Managerial Competence (X2)	16 indicators of managerial competence (Minister Regulation No. 13/2007)	16
Teacher Performance (Y)	Planning; delivering; evaluating learning; restitution triangle	13

Source: Authors' data processing (2025)

Before analysis, item validity was assessed using Pearson product-moment correlations and internal consistency was assessed with Cronbach's alpha. The analytical sequence included descriptive statistics, normality, linearity, multicollinearity, and heteroscedasticity checks, followed by correlation, simple regression, multiple regression, t-tests, F-tests, and coefficients of determination. H1 and H2 were examined with simple regressions; H3 was examined with the multiple-regression F-test. Microsoft Excel 2019 and IBM SPSS Statistics 29 were used for computation.

The decision to report simple-regression results for H1 and H2 reflects the observed collinearity between the two predictors. When predictors are nearly redundant, coefficients in a joint regression can become unstable and their unique effects difficult to interpret. Correlation and VIF diagnostics were therefore used to flag this limitation; the simultaneous model was retained only to assess the combined association of the two leadership variables with teacher performance (Hidayat et al., 2023).

RESULTS AND DISCUSSION

Respondent Characteristics

Nineteen teachers contributed usable responses. Table 2 summarises their demographic characteristics.

Table 2

Respondent Characteristics (n = 19)

Characteristic	Category	f	%
Gender	Female	17	89.5
	Male	2	10.5
Education	Bachelor's (S1)	16	84.2
	Master's (S2)	3	15.8
Employment Status	PPPK (contract civil servant)	13	68.4
	PNS (civil servant)	6	31.6
Years of Service	1–5 years	6	31.6
	6–10 years	4	21.1
	11–20 years	3	15.8
	> 20 years	6	31.6

Source: Authors' data processing (2025)

Most respondents were women (89.5%), had completed a bachelor's degree (84.2%), and held PPPK appointments (68.4%). Their mean age was 42.7 years and mean teaching experience was 14.1 years. These characteristics indicate that participants had sufficient experience to describe leadership and supervisory practices at the school, although the sample should not be treated as representative of Indonesian teachers generally (Werdiningsih, 2024).

Instrument Testing

Table 3 reports the item-validity and reliability results. With df = 17 at the 5% level, the reference r value is .456.

Table 3

Summary of Validity and Reliability Tests

Variable	Valid Items	r Range	Alpha	Note
Academic Supervision (X1)	11 of 12	0.421–0.980	0.948	Reliable
Managerial Competence (X2)	16 of 16	0.849–0.987	0.990	Reliable
Teacher Performance (Y)	13 of 13	0.800–0.980	0.974	Reliable

Source: Authors' data processing (2025)

The instrument demonstrates high internal consistency across the three constructs. Nearly all items exceed the stated validity threshold; one academic-supervision item falls marginally below it. The result should be considered when interpreting the construct, even though the overall reliability values exceed .60.

Descriptive Analysis

Mean scores were classified as high (3.01–4.00), moderate (2.01–3.00), or low (1.01–2.00). Table 4 presents the construct-level descriptive results.

Table 4

Descriptive Statistics of the Research Variables (n = 19)

Variable	Min	Max	Item Mean	Category
Academic Supervision (X1)	35	48	3.59	High
Managerial Competence (X2)	47	64	3.65	High
Teacher Performance (Y)	37	52	3.64	High

Source: Authors' data processing (2025)

All three constructs are rated in the high range. Respondents therefore generally reported favourable experiences of academic supervision and managerial competence alongside high teacher performance. These results describe perceptions within this particular school and should not be read as an external audit of leadership quality.

Table 5

Mean Scores per Dimension

Variable	Dimension	Item Mean	Category
Academic Supervision (X1)	Planning	3.60	High
	Implementation	3.55	High
	Follow-up	3.64	High
Managerial Competence (X2)	16 Indicators	3.64	High
	Planning	3.57	High
Teacher Performance (Y)	Delivering	3.70	High
	Evaluating	3.68	High
	Restitution Triangle	3.65	High

Source: Authors' data processing (2025)

The dimension-level results are also high. Within academic supervision, follow-up receives the highest mean (3.60–3.64), whereas implementation is lowest (3.55), suggesting that the classroom-stage of supervision may need greater attention. Within teacher performance, delivering obtains the highest mean (3.70).

Prerequisite Analysis Tests

Table 6 consolidates the prerequisite-test results used to assess the regression analysis.

Table 6

Summary of Prerequisite Analysis Tests

Test	Value	Note
Normality (Kolmogorov-Smirnov)	Sig. = 0.305	Normal
Heteroscedasticity (Breusch-Pagan)	Sig. = 0.124	Homoscedastic
Multicollinearity	VIF = 21.05; Tol. = 0.048	Multicollinearity present

Source: Authors' data processing (2025)

Normality and heteroscedasticity criteria were met, but the predictors were extremely highly correlated ($r = .976$) and produced $VIF = 21.05$. This exceeds the common VIF threshold of 10 and indicates severe multicollinearity. Consequently, joint-model coefficients cannot be interpreted as clean estimates of each predictor's unique effect. The study therefore presents simple regressions for the two partial hypotheses and reserves the multiple regression for the combined F-test (Hidayat et al., 2023).

Hypothesis Testing

Table 7 presents the variable correlations, and Table 8 reports the regression and hypothesis-test results.

Table 7

Correlation Matrix Among Variables

Relationship	r	Sig.	Level
X1 – Y	0.874	0.000	Very High
X2 – Y	0.850	0.000	Very High
X1 – X2	0.976	0.000	Very High

Source: Authors' data processing (2025)

Table 8

Regression Analysis and Hypothesis Testing Results

Hyp.	Test	Statistic	R ²	Decision
H1	$Y = 4.851 + 0.986X_1$ (simple regression)	$t = 7.424$; $p = 0.000$	76.4%	Accepted
H2	$Y = 5.622 + 0.716X_2$ (simple regression)	$t = 6.651$; $p = 0.000$	72.2%	Accepted
H3	$X_1, X_2 \rightarrow Y$ (simultaneous F-test)	$F = 25.970$; $p = 0.000$	76.4%	Accepted

Source: Authors' data processing (2025)

Both simple regressions produced t values above the critical value of 2.110, with $p < .001$. The combined model was also significant ($F = 25.970$, $p < .001$), exceeding the reported critical F of 3.634. H1, H2, and H3 are therefore supported within this sample; however, the small sample and strong predictor overlap require cautious interpretation.

Discussion

Academic supervision was positively associated with teacher performance and explained 76.4% of the variance in the simple model. This pattern is consistent with supervision as developmental assistance rather than evaluative inspection (Daresh, 1989; Glickman et al., 2007; Xu et al., 2024). It also accords with prior evidence that feedback and follow-up are valuable for teacher performance (Handayani et al., 2022; Rahman & Husain, 2022; Wulandari & Juharyanto, 2021). The high score for follow-up in this study suggests that teachers may particularly value coaching after supervisory activity.

Managerial competence likewise showed a positive simple association with teacher performance, explaining 72.2% of the variance. This is compatible with the view that principals influence teaching by organising resources, expectations, professional support, and the working climate (Nugroho et al., 2023; Sari et al., 2023; Warman, 2022). The result does not show that

managerial competence alone causes higher performance, but it indicates that teachers who perceive stronger management also report stronger performance.

The two variables jointly explained 76.4% of teacher-performance variance, yet their correlation of .976 means that they cannot be treated as clearly separable predictors in this dataset. Substantively, teachers may experience academic coaching and managerial practice as a single leadership package. This interpretation is in line with research describing supervision, management, school culture, and teacher commitment as interconnected leadership processes (Munacia et al., 2024; Muttaqin et al., 2023).

The findings contribute to educational-management research by highlighting the combined character of instructional support and school management in a single-school context. They also align with instructional-leadership accounts in which principals affect teaching through organisational conditions, relationships, and professional support rather than through one isolated action (Hallinger, 2018; Hallinger & Heck, 2010; Yulianti et al., 2026). In practice, schools should connect supervision schedules, feedback routines, resource allocation, and professional-development planning.

The implementation dimension of supervision had the lowest relative score, although it remained high. This may reflect the difficulty of protecting time for classroom observation amid a principal's administrative workload, a challenge noted elsewhere (Andarwati et al., 2023). More regular observation cycles, scheduled feedback, and carefully supported mentoring by senior teachers may help strengthen this stage.

Several limitations constrain the study. It covers one school and only 19 respondents, relies on self-report data, and contains severe multicollinearity between the predictors. The findings should thus be treated as context-specific evidence rather than general estimates of distinct causal effects. Future research should recruit across schools, refine potentially overlapping indicators, and use mixed methods or interviews to examine how teachers distinguish supervisory support from managerial leadership.

CONCLUSION

At SMA Negeri 1 Soreang, academic supervision and principal managerial competence were each positively associated with teacher performance, and their joint model was statistically significant. Academic supervision explained 76.4% of variance in the simple model, managerial competence explained 72.2%, and the combined F-test was significant ($F = 25.970$, $p < .05$). Because the predictors were highly collinear, the study supports an interpretation of integrated leadership rather than claims about independently estimated effects.

The school should prioritise the implementation phase of supervision through protected observation time, structured feedback, and follow-up coaching. Principals can reinforce this work through coherent resource management and a supportive professional climate.

Teachers may use supervision as a professional-learning opportunity by engaging actively with feedback and collaborative improvement. Education authorities should develop leadership programmes that integrate instructional supervision with managerial capability. Subsequent studies should include more schools and respondents, test clearer non-overlapping measures, and combine survey data with qualitative accounts of leadership practice.

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AUTHOR CONTRIBUTION STATEMENT

All authors contributed to the study conception, design, data collection, analysis, interpretation, drafting, and revision. Each author approved the submitted manuscript and accepts responsibility for the accuracy and integrity of the work.

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