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The Effect of Strategic Leadership and Positive Learning Climate on Teacher Teaching Performance

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ABSTRACT

This study investigates how strategic leadership and a positive learning climate influence teachers' instructional performance in Indonesian primary schools, addressing ongoing challenges in improving teaching quality within resource-constrained contexts. Using a quantitative survey of 300 teachers from 51 public schools in Purwakarta Regency, West Java Province, the data were analyzed through Partial Least Squares–Structural Equation Modeling (PLS-SEM). The findings demonstrate that strategic leadership exerts significantly stronger influence (β=0.527, f^2=0.453) on instructional performance compared to positive learning climate (β=0.295, f^2=0.142), with strategic leadership producing 1.79 times greater effect. Together, both variables explain 49.4% of the variance in teachers' instructional performance, with strategic leadership accounting for the preponderance of this explanatory power. The study concludes that enhancing strategic leadership particularly through developing vision, coordinating programs, supervising instruction, monitoring progress, and ensuring accountability constitutes the primary lever for improving teaching effectiveness in resource-limited Indonesian schools. These evidence-based findings provide crucial guidance for policymakers and school leaders to strategically allocate limited professional development resources, prioritizing high-leverage leadership practices that maximize returns on investment. Implications address national policy reforms for principal preparation, district-level coaching programs, and school-level implementation of systematic supervisory practices.

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INTRODUCTION

Educational quality in developing nations largely depends on teachers' instructional effectiveness, which is strongly influenced by school leadership and organizational conditions (Akkaraputtapong et al., 2025). This relationship is particularly important in the Indonesian context, where improving educational quality and developing competitive human resources remain key national priorities. However, Indonesian primary education continues to face persistent challenges in achieving expected quality standards. A significant gap remains between policy aspirations and classroom realities, particularly in terms of teacher professional performance and instructional effectiveness that directly influence student learning outcomes (Sariakin et al., 2025).

Evidence of these challenges can be observed in educational quality data from Purwakarta Regency, West Java Province, which reflects conditions commonly found in many regions across Indonesia. The 2018 School Quality Report indicates that the standard for educators and educational personnel at the primary level remained at National Education Standard level 3, with an achievement score of 4.08—far below the national benchmark of 6.67–7.00. Similar concerns appear in the results of the 2019 Teacher Competency Test, where Purwakarta Regency ranked 23rd among 27 regencies and cities in West Java Province, with a score of 55.19 compared to the provincial average of 56.65. These findings suggest that the issue extends beyond individual

teacher performance and reflects broader systemic challenges related to educational leadership practices and teacher professional development. Such conditions highlight the need for deeper investigation and evidence-based strategies to improve instructional quality.

These challenges reflect patterns observed in many developing countries, where education reforms often emphasize infrastructure development and financial investment while overlooking the critical role of teacher instructional capacity (OECD, 2024). A growing body of international research highlights that school leadership plays a crucial role in improving educational outcomes through specific leadership practices rather than general administrative competence (Shen et al., 2020). Meta-analytic evidence consistently shows that leadership ranks second only to classroom instruction among school-related factors affecting student learning, with effect sizes ranging from 0.19 to 0.25 standard deviations. Importantly, leadership influences student learning largely indirectly by shaping teachers' beliefs, professional behaviors, and instructional practices.

Within this perspective, two key leadership dimensions have received particular attention in the literature strategic leadership and the development of a positive learning climate. Strategic leadership focuses on guiding instructional improvement through practices such as articulating a shared vision, coordinating instructional programs, supervising teaching practices, monitoring progress, and establishing accountability mechanisms (Lai & Lien, 2025; Cansoy, 2025; Kshetree, 2023). Complementarily, a positive learning climate refers to supportive organizational conditions that foster teacher development, including effective time management, recognition systems, professional development opportunities, collaboration, teacher empowerment, and adequate resource support (Samarah & Melamed, 2025; Wang & Degol, 2020). Such environments strengthen teacher motivation, self-efficacy, job satisfaction, and ultimately enhance instructional effectiveness (Liebowitz, 2022; Tang et al., 2024; Sulak & Erdogan, 2025).

Although previous studies consistently show that both strategic leadership and a positive learning climate contribute to improved teacher performance, several gaps remain in understanding their roles within Indonesian educational contexts. Many studies conceptualize leadership as a unidimensional construct without distinguishing between strategic competencies and climate-building practices, limiting guidance for leadership development priorities (Huda et al., 2025). In addition, existing studies often rely on relatively simple analytical methods that are less capable of examining multiple predictors simultaneously while accounting for measurement error (Nugroho et al., 2024). Furthermore, few studies report comparative effect sizes that would help policymakers determine which leadership dimensions produce the greatest impact in resource-constrained educational systems (Kraft, 2020). Consequently, policymakers, district administrators, and school leaders often lack clear empirical evidence to guide decisions regarding which leadership practices should be prioritized to improve teacher instructional performance.

To address these limitations, this study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to examine the differential effects of multidimensional strategic leadership and positive learning climate on teacher teaching performance in Indonesian primary schools. This approach enables the simultaneous analysis of multiple predictors while accounting for measurement error and estimating comparative effect sizes more accurately. Specifically, the study aims to (1) provide empirical evidence regarding the relative magnitude of the effects of strategic leadership and positive learning climate, (2) validate multidimensional measurement instruments appropriate for the Indonesian primary education context, and (3) strengthen methodological rigor in educational leadership research through the application of advanced structural equation modeling techniques. By providing comparative effect size evidence and validated constructs, this study contributes to the development of multidimensional leadership frameworks within Indonesian education while offering practical guidance for policymakers, district administrators, and school principals in prioritizing leadership practices that most effectively improve teacher instructional effectiveness and overall educational quality.

METHOD

This investigation employed a quantitative correlational design using cross-sectional survey methodology to examine relationships between strategic leadership, positive learning climate, and teacher teaching performance (Creswell & Creswell, 2018). The target population comprised 2,658 teachers from 381 public primary schools across 17 sub-districts in Purwakarta Regency, West Java Province. Sample selection employed proportional cluster stratified random sampling, ensuring representativeness across geographical areas and school types while controlling for geographical and organizational variation effects. The final sample included 300 teachers from 51 schools, achieving a 100% response rate. Sample size substantially exceeded minimum PLS-SEM requirements (recommended minimum of 138 cases based on 5% significance level and medium effect size) while providing adequate statistical power (0.80) for detecting medium effect sizes at α=0.05 significance level, enabling robust hypothesis testing and generalizable findings within the specified population.

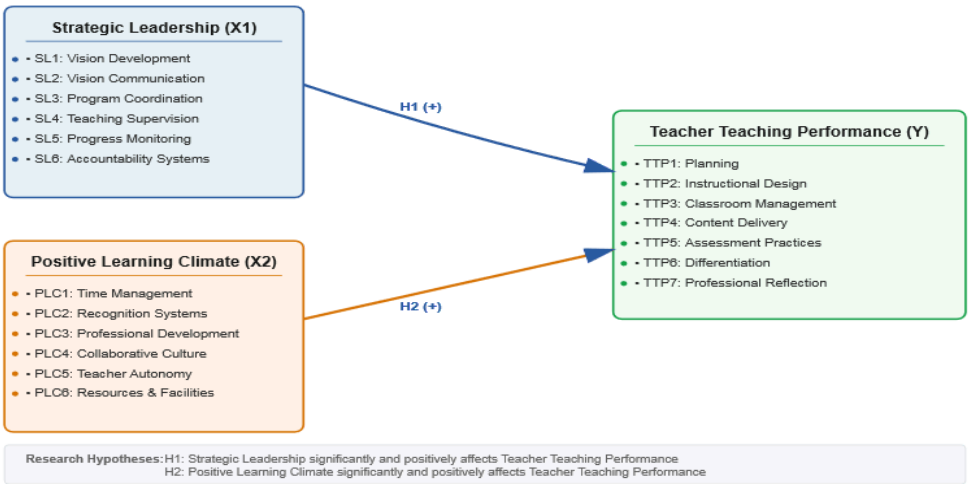

Figure 1. Conceptual Framework of The Study

Data collection procedures incorporated systematic controls for common sources of bias and validity threats. The research employed 4-point Likert scales (1=Never, 2=Rarely, 3=Often, 4=Always) designed to minimize response categories that enable social desirability bias while maintaining adequate discrimination between response options. Data collection occurred through carefully coordinated procedures involving district-level authorization, ensuring institutional support, and systematic quality control. Trained data collectors administered surveys in consistent formats across all 51 schools, with procedures ensuring anonymity and voluntary participation to reduce response bias.

Three comprehensive instruments were developed based on established international frameworks and adapted for Indonesian contexts. Strategic leadership (X1) was operationalized through six indicators (SL1-SL6) comprising 18 items, adapted from Lai & Lien's (2025). Principal Instructional Leadership Scale and Shen et al. (2020) teacher leadership framework: vision development, vision communication, program coordination, teaching supervision, progress monitoring, and accountability systems. Positive learning climate (X2) was assessed through six indicators (PLC1-PLC6) comprising 18 items, based on Samarah & Melamed's (2025) organizational climate framework and Wang & Degol's (2020) classroom climate model: time management, recognition systems, professional development, collaborative culture, teacher autonomy, and resources/facilities. Teacher teaching performance (Y) was evaluated through seven indicators (TTP1-TTP7) comprising 28 items, based on Indonesian assessment instruments and contemporary frameworks for teaching effectiveness Dutta & Sahney, 2022): planning, instructional design, classroom management, content delivery, assessment practices, differentiation, and professional reflection.

Analysis employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS 4.0 software (Hair et al., 2022). The analysis followed a systematic two-stage approach following Hair et al. (2022) recommendations for rigorous PLS-SEM analysis. Stage 1 assessed measurement model validity and reliability through indicator loadings (examining whether items measure intended constructs), internal consistency (Cronbach's Alpha and Composite Reliability), convergent validity (Average Variance Extracted), and discriminant validity (Fornell-Larcker criterion and HTMT assessment). These stages ensure that constructs are measured with sufficient accuracy and distinctiveness before examining structural relationships. Stage 2 examined structural relationships through collinearity assessment (examining predictor independence), path coefficient significance via bootstrapping with 5,000 resamples (generating precise estimates of relationship strength), R^2 for explanatory power (variance explained in outcome variables), effect size (f^2 indicating practical significance of relationships), predictive relevance (Q^2 confirming model's predictive utility beyond mere description), and model fit evaluation (SRMR and NFI confirming overall model appropriateness). This comprehensive approach ensures robust findings grounded in defensible methodology that controls for measurement error, multicollinearity, and other validity threats.

RESULTS AND DISCUSSION

Results

Descriptive analysis revealed distinct implementation patterns across the three central constructs that inform interpretation of structural relationships. Strategic leadership demonstrated excellent overall implementation (M=83.61%, SD=8.42), with vision development (85.23%) and vision communication (84.56%) showing the strongest performance, suggesting that Indonesian principals excel at articulating inspirational visions aligned with national and local educational goals. However, more operational dimensions showed slightly lower scores, with program coordination (82.89%), progress monitoring (82.48%), and teaching supervision (82.15%) demonstrating adequate but less robust implementation, suggesting that translating inspirational visions into systematic instructional improvement practices requires sustained capacity building in technical competencies. Positive learning climate showed good but more variable implementation (M=77.24%, SD=9.87), with professional development support achieving the highest scores (85.57%), but recognition systems (72.89%) and time management (73.26%) showed notably lower performance, reflecting resource constraints and competing administrative demands documented across developing country contexts. Teacher leadership correlated more strongly with teacher teaching performance (r=0.654, p<0.01) than positive learning climate teaching performance achieved excellent levels (M=87.84%, SD=6.95), with planning (89.24%) and professional reflection (89.86%) demonstrating the highest implementation. Correlation analysis revealed that strategic (r=0.536, p<0.01).

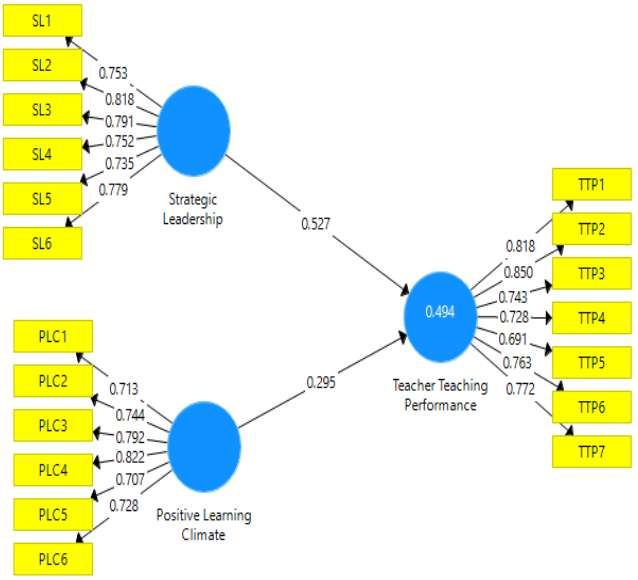

Figure 2. Measurement Model (Outer Model)

A comprehensive measurement model assessment examined construct validity and reliability through multiple criteria, ensuring accurate measurement before structural relationship analysis. Convergent validity assessment showed all indicator loadings substantially exceeded the 0.70 threshold, ranging from 0.691 (TTP5) to 0.850 (TTP2), with t-values from 19.865 to 49.989 (all p<0.001). AVE values exceeded 0.50 for all constructs (Strategic Leadership: 0.596, Positive Learning Climate: 0.566, Teacher Teaching Performance: 0.590), confirming adequate convergent validity. Discriminant validity was comprehensively confirmed through cross-loading analysis showing each indicator loading substantially higher on its intended construct than on alternative constructs (differences 0.22 to 0.44), Fornell-Larcker criterion with √AVE exceeding correlations, and HTMT values below 0.85 threshold (range: 0.482 to 0.751), confirming that distinct constructs measured different phenomena without problematic overlap. Internal consistency reliability demonstrated excellence with Cronbach's Alpha (0.846-0.883), rho_A (0.855-0.889), and Composite Reliability (0.886-0.909), all exceeding 0.80.

Following satisfactory measurement model results, structural model assessment examined relationships between constructs through collinearity assessment, explanatory power evaluation, and effect size analysis. Collinearity assessment showed VIF values of 1.210 for both predictor constructs, well below the 5.0 threshold, indicating no multicollinearity concerns. The model explained 49.4% of the variance in teacher teaching performance (R^2=0.494, adjusted R^2=0.491), indicating substantial explanatory power. Strategic leadership demonstrated a large effect size (f^2=0.453), while positive learning climate showed a

small effect size (f^2=0.142). Model quality assessment confirmed good predictive relevance (Q^2=0.287), good model fit (SRMR=0.053 < 0.08), and acceptable fit (NFI=0.907 > 0.80).

Table 1. Convergent Validity Results

Construct	Indikator	Loading	t-value	p-value	AVE	Status
Strategic Leadership (X1)					0.596	Met
	SL1: Vision Development	0.753	25.871	0.000		Met
	SL2: Vision Communication	0.818	44.499	0.000		Met
	SL3: Program Coordination	0.791	35.250	0.000		Met
	SL4: Teaching Supervision	0.752	28.352	0.000		Met
	SL5: Progress Monitoring	0.735	24.774	0.000		Met
	SL6: Accountability Systems	0.779	33.572	0.000		Met
Positive Learning Climate (X2)					0.566	Met
	PLC1: Time Management	0.713	19.865	0.000		Met
	PLC2: Recognition Systems	0.744	26.000	0.000		Met
	PLC3: Professional Development	0.792	31.353	0.000		Met
	PLC4: Collaborative Culture	0.822	40.655	0.000		Met
	PLC5: Teacher Autonomy	0.707	20.638	0.000		Met
	PLC6: Resources & Facilities	0.728	21.008	0.000		Met
Teacher Teaching Performance (Y)					0.590	Met
	TTP1: Planning	0.818	40.422	0.000		Met
	TTP2: Instructional Design	0.850	49.989	0.000		Met
	TTP3: Classroom Management	0.743	24.663	0.000		Met
	TTP4: Content Delivery	0.728	23.429	0.000		Met
	TTP5: Assessment Practices	0.691	20.947	0.000		Met
	TTP6: Differentiation	0.763	27.877	0.000		Met
	TTP7: Professional Reflection	0.772	31.571	0.000		Met

Table 2. Fornell-Larcker Criterion and HTMT Assessment

Construct	X1	X2	Y	HTMT X1	HTMT X2
Strategic Leadership (X1)	0.772				
Positive Learning Climate (X2)	0.417	0.752		0.482	
Teacher Teaching Performance (Y)	0.654	0.536	0.768	0.751	0.617

Table 3. Reliability Assessment

Construct	Cronbach's Alpha	rho_A	Composite Reliability	Status
Strategic Leadership (X1)	0.846	0.867	0.886	Excellent
Positive Learning Climate (X2)	0.864	0.855	0.898	Excellent
Teacher Teaching Performance (Y)	0.883	0.889	0.909	Excellent

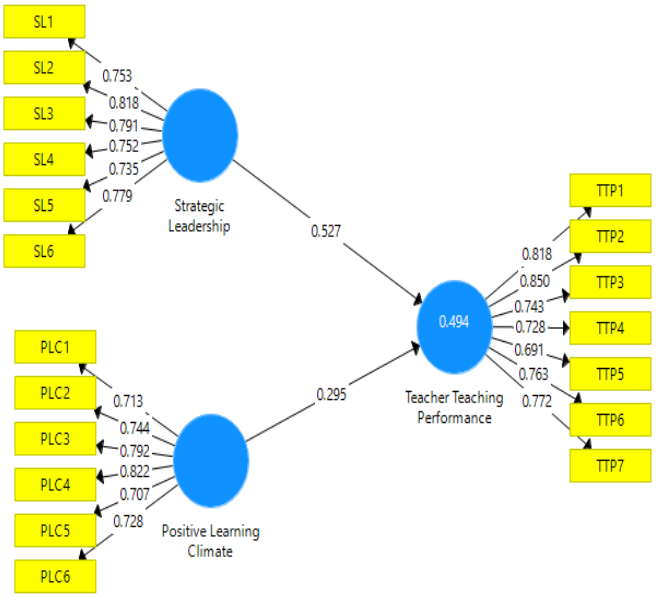

Figure 3. Structural Model (Inner Model)

Table 4. Hypothesis Testing Results

Hypothesis	Path	β	SE	t-value	p-value	95% CI Lower	95% CI Upper	f²	Decision
H1: Strategic leadership significantly affects teacher teaching performance	X1 → Y	0.527	0.041	12.758	0.000	0.449	0.603	0.453	Supported
H2: Positive learning climate significantly affects teachers' teaching performance	X2 → Y	0.295	0.042	7.074	0.000	0.211	0.374	0.142	Supported

Hypothesis testing revealed that strategic leadership significantly and positively influences teacher teaching performance (β=0.527, t=12.758, p<0.001, f²=0.453), representing the strongest predictor with a large effect size. A one standard deviation increase in strategic leadership results in a 0.527 standard deviation increase in teacher teaching performance, controlling for positive learning climate effects. The 95% confidence interval (0.449 to 0.603) excludes zero with a substantial margin, confirming the robustness of this positive effect. Positive learning climate significantly and positively influences teacher teaching performance (β=0.295, t=7.074, p<0.001, f²=0.142) with a small effect size. A one standard deviation increase in positive learning climate leads to a 0.295 standard deviation increase in teacher teaching performance, controlling for strategic leadership effects. The 95% confidence interval (0.211 to 0.374) confirms the positive and stable nature of this relationship, though the smaller effect size indicates climate variables contribute meaningfully but less substantially than strategic practices. Critically, comparative effect size analysis revealed that strategic leadership exerts 1.79 times greater influence than positive learning climate (0.527/0.295=1.79), providing concrete evidence-based guidance for resource allocation where investments in strategic leadership development generate substantially larger returns than equivalent climate-building investments.

Discussion

The finding that strategic leadership demonstrates substantially stronger influence (β=0.527, f²=0.453) than positive learning climate on teacher teaching performance provides crucial insights for prioritizing leadership development investments in resource-constrained Indonesian educational contexts. This large effect size confirms that systematic attention to vision development, program coordination, teaching supervision, progress monitoring, and accountability systems directly enhances teacher instructional effectiveness. These findings align with Shen et al. (2020), A meta-analysis demonstrating that teacher leadership focused on curriculum, instruction, and assessment improvement produces significant positive associations with student achievement (r=0.19). Similarly, recent research by Grissom et al. (2021) concluded that principal practices directly targeting instruction, including classroom observations, feedback provision, and instructional program coordination, yield substantially stronger impacts on teacher performance than general school management activities. Empirically, transformational leadership that integrates vision articulation with systematic supervision and program coordination emerges as the dominant mechanism through which principals drive instructional quality in Indonesian schools (Irvansyah et al., 2023).

The strong descriptive performance in vision development (85.23%) and vision communication (84.56%) reflects Indonesian cultural emphasis on consensus-building and relationship-oriented leadership approaches, as documented by contemporary research in Asian educational contexts (Chen & Guo, 2020). However, slightly lower scores for operational implementation program coordination (82.89%), progress monitoring (82.48%), and teaching supervision (82.15%) suggest that translating strategic visions into systematic instructional improvement practices requires sustained capacity building in technical competencies that many Indonesian principals have not extensively developed. Recent studies in Southeast Asian schools found similar patterns, where principals demonstrated strong relational capacities but required intensive professional development to develop technical expertise in data-informed instruction and evidence-based feedback provision (Amzat et al., 2022; Cansoy, 2025). Research in Islamic-integrated school contexts demonstrates that while principals excel at articulating inspirational visions grounded in religious values, the translation of these visions into structured pedagogical systems requires deliberate systems design and technical coaching (Melinda & Surakarta, 2025). The exceptionally strong effect size (f²=0.453) for strategic leadership in this study notably exceeds effect sizes typically reported in Western contexts, suggesting that strategic practices may operate particularly powerfully in Indonesian schools where teaching quality exhibits high variability due to diverse teacher preparation backgrounds, limited ongoing professional development, and varied access to educational resources, making strategic leadership coordination particularly consequential for establishing educational coherence and direction (Sariakin et al., 2025).

Positive learning climate's significant yet smaller effect (β=0.295, f²=0.142) confirms its importance while highlighting implementation challenges in resource-constrained contexts. Professional development support achieved the highest implementation (85.57%), indicating principals' genuine commitment to teacher growth and continuous learning despite resource limitations, a finding reflecting strong professional values within Indonesian education. However, recognition systems (72.89%) and time management (73.26%) showed notably lower performance, reflecting realistic resource constraints and competing administrative demands that plague developing country school systems.

The challenge of providing meaningful recognition and managing instructional time reflects both fiscal constraints limiting reward structures and the reality that administrative demands often overwhelm available principal time. Despite its smaller effect size, the climate's statistical significance confirms that supportive organizational conditions facilitate teacher risk-taking, innovation, and continuous improvement by creating psychological safety, enabling teachers to experiment with new approaches and openly discuss challenges (Samarah & Melamed, 2025; Tang et al., 2024). The psychological mechanisms underlying these climate effects operate through creating organizational conditions where teachers feel genuinely safe to implement challenging new instructional strategies, openly discuss teaching problems and failures with colleagues and leaders, and willingly invest discretionary effort in improvement activities beyond minimum job requirements, ultimately contributing meaningfully to performance outcomes even though strategic leadership produces larger effects (Sulak & Erdogan, 2025).

This study advances educational leadership theory by validating multidimensional Western-derived frameworks within Indonesian cultural contexts while revealing culturally specific implementation patterns that enhance contextual understanding. The findings confirm that fundamental strategic leadership practices vision articulation, program coordination, instructional supervision, progress monitoring, and accountability operate effectively across cultural boundaries, supporting recent arguments for certain universal principles of effective educational leadership that transcend national contexts (Shen et al., 2020; Akkaraputtapong et al., 2025). However, the specific mechanisms through which these practices operate show important contextual variation, with Indonesian principals demonstrating particular strength in vision development and communication rooted in relationship-oriented cultural values while showing relative weakness in systematic supervision and data-informed decision-making, reflecting both cultural strengths and gaps in technical capacity requiring targeted professional development (Huda et al., 2025; Nugroho et al., 2024). The remarkably large effect size for strategic leadership suggests that the multiple challenges facing Indonesian education including teacher quality variation, resource constraints, and implementation gaps may create conditions where coherent strategic direction from school leadership becomes particularly consequential for establishing coherence and enabling improvement, a pattern not as pronounced in more resourced systems where multiple mechanisms can compensate for weaker leadership.

Practically, the differential effect sizes offer concrete, evidence-based guidance for maximizing educational improvement impact within inevitable resource constraints. The finding that strategic leadership exerts 1.79 times greater influence than positive learning climate provides quantified evidence supporting resource allocation priorities: approximately 65-75% of principal development resources should target strategic leadership competencies, with 25-35% devoted to climate-building practices. This allocation acknowledges both factors' importance while allocating the preponderance of resources toward demonstrably higher-leverage practices. For national policymakers, these findings suggest redesigning principal preparation programs to emphasize strategic leadership competencies vision articulation, instructional coordination, systematic supervision, and accountability system development as core program components receiving intensive focus throughout preparation (Aseery, 2025; OECD, 2024).

District administrators implementing professional development should create intensive coaching programs focused on strategic leadership through sustained mentoring relationships where experienced leaders help principals develop data-informed decision-making, effective instructional observation and feedback techniques, and systematic program coordination practices (Kraft, 2020). School principals should prioritize establishing clear educational visions and developing systematic supervision routines, providing regular classroom observations with constructive feedback, and implementing high-leverage practices requiring minimal financial investment but yielding significant returns through improved teacher teaching performance, ensuring that limited available time and resources generate maximum impact (Cansoy, 2025; Dutta & Sahney, 2022).

Several limitations warrant systematic consideration and honest acknowledgment. The cross-sectional design, while appropriate for examining relationships, limits causal inference despite strong theoretical foundations and robust statistical results, requiring longitudinal studies to capture developmental processes showing how leadership improvements gradually influence teacher behavior changes (Akkaraputtapong et al., 2025; Rechsteiner et al., 2022). Single-source teacher perceptions introduce potential common method variance, where respondents' tendency to answer similarly across items may

inflate relationships, necessitating multi-source data collection incorporating principal self-reports about leadership practices, external observer ratings of actual leadership behaviors, and objective performance indicators (Kraft & Christian, 2022; Röhl et al., 2025).

Geographic limitation to one regency, while providing meaningful depth, restricts generalizability to other Indonesian regions with different teacher populations, resource conditions, and school system characteristics, requiring comparative studies across provinces to identify contextual moderators socioeconomic conditions, teacher preparation backgrounds, and resource availability that might strengthen or weaken reported relationships (Huda et al., 2025; OECD, 2024). The model's 49.4% explained variance, while substantial, indicates that additional factors warrant investigation and future inclusion, including teacher individual characteristics (motivation, preparation, self-efficacy), school organizational factors (school size, student demographics, community resources), and broader community contexts that shape school conditions (Liebowitz, 2022). Future research should investigate mediating mechanisms through which leadership practices translate into teacher behavior changes, particularly teacher self-efficacy, organizational commitment, and collective efficacy that might explain how leadership practices ultimately influence performance, and examine potential moderating variables that strengthen or weaken leadership effects across different school and community contexts (Chen & Guo, 2020).

CONCLUSION

This study provides empirical evidence that both strategic leadership and a positive learning climate significantly influence teacher instructional performance in Indonesian primary schools, although their effects differ in magnitude. Strategic leadership demonstrates a stronger influence ($\beta = 0.527$; $f^2 = 0.453$) than positive learning climate ($\beta = 0.295$; $f^2 = 0.142$), with both variables explaining 49.4% of the variance in teacher teaching performance. These findings indicate that strategic leadership has approximately 1.79 times greater impact than learning climate, highlighting the importance of prioritizing leadership practices that directly support instructional improvement. Methodologically, the study demonstrates the application of Partial Least Squares Structural Equation Modeling (PLS-SEM) with comprehensive construct validation in Indonesian educational leadership research. Theoretically, the findings support multidimensional leadership frameworks while indicating that principals excel in vision communication but require further development in instructional supervision competencies. Practically, the results suggest that policymakers and school administrators should prioritize strategic leadership practices, particularly instructional supervision and program coordination, to improve teacher instructional performance and strengthen the quality of primary education in Indonesia.

SUGGESTION AND FUTURE RESEARCH DIRECTIONS

The findings of this study provide important implications for educational policy and practice in Indonesia. For national policymakers and educational authorities, principal preparation programs should place greater emphasis on developing strategic leadership competencies, including vision communication, instructional program coordination, teaching supervision, progress monitoring, and accountability systems. Strengthening these competencies will help ensure that school principals possess the technical leadership skills necessary to support systematic school improvement and enhance teacher instructional performance.

At the district and provincial levels, education authorities are encouraged to implement sustained coaching and mentoring programs for school principals. Rather than relying on short-term training, these programs should focus on practical leadership development, including instructional supervision, data-informed decision-making, and program coordination. Systematic monitoring of leadership practices, such as classroom observations and supervision routines, can also help strengthen leadership accountability and effectiveness.

For school principals, the findings highlight the importance of prioritizing strategic leadership practices that directly support teacher performance, including regular classroom observations, constructive feedback, and clear instructional goals. Future research should expand this study by using longitudinal designs, multi-source data, and comparative studies across regions to better understand how leadership practices influence teacher performance and student learning outcomes in different educational contexts.

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