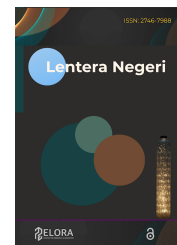




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Managerial leadership and teacher performance: a systematic review of principal effectiveness in elementary education

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ABSTRACT

This study aims to identify and synthesize evidence from previous studies on factors influencing the principal's role in improving teacher performance, and to develop a conceptual framework derived from various findings. This research employs the Systematic Literature Review (SLR) method following the PRISMA 2020 guidelines. Searches were conducted across five databases (Scopus, Web of Science, ERIC, Google Scholar, and SINTA). From 457 initial articles, only 100 passed the screening and were analyzed using thematic synthesis. From the 100 articles, four main factors influencing principal leadership on teacher performance were identified: 1) principal internal factors (managerial competence, leadership style, communication, and charisma); 2) school environmental factors (school culture, organizational climate, and academic supervision); 3) teacher factors (work motivation, commitment, discipline, and pedagogical competence); and 4) system and policy factors (compensation, professional development, community-based policies, and school committee roles). Among these four factors, principals' managerial competence was the most dominant (mentioned in 78 of 100 articles). Additionally, teacher work motivation was found to play an important mediating role, mentioned in 65 of 100 articles. Sustainable improvement in teacher performance can be achieved through strengthening principals' managerial competence, enhancing teacher motivation and commitment, developing positive school culture and climate, and reinforcing supervision and supportive policies. These findings are expected to serve as a reference framework for education stakeholders and a foundation for future researchers to conduct field testing.



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Introduction

Background

The quality of elementary education is largely determined by teacher performance (Dutta & Sahney, 2022), which is a primary concern at the elementary school level in Indonesia (Pinem et al., 2026). Through the managerial functions of POAC (planning, organizing, actuating, controlling), principals play a strategic role in creating optimal conditions for teachers (Wicoksono et al., 2022; Wenno, 2017). Pinem et al. (2026) reported a correlation of 0.867, while Sudarto & Niron (2025) separately found that principal leadership contributes 75.2% to teacher performance both findings mutually reinforce each other as they measure total effects (including indirect effects through mediating variables). However, it should be noted that Wahyono

& Sutanto (2021) reported a smaller figure (7.7%) because this represents the pure direct effect after controlling for other variables. This difference actually indicates the presence of mediating variables (such as motivation and school climate) that play important roles and warrant further investigation. Nevertheless, comprehensive synthesis regarding mediating and moderating factors in the relationship between principal leadership and teacher performance, particularly applicable to the context of UPTD SD Negeri 1 Metro Utara (Lampung), remains very limited. A thorough understanding of these factors is essential for formulating evidence-based policies and interventions to improve education quality, both in that school and in other elementary schools across Indonesia.

State of the Art

Research on principal leadership and teacher performance has developed rapidly. International studies (indexed in Scopus/WoS) encompass transformational, instructional, and managerial leadership styles, with consistent findings that leadership has significant effects, both directly and through mediation of motivation, commitment, and school climate (Berkovich & Bogler, 2021; Battal & Demirkasimoğlu, 2026). National studies (indexed in SINTA 2/Google Scholar) confirm international findings with an emphasis on principals' managerial competence (Wicoksono et al., 2022; Sudarto & Niron, 2025). Mapping of Tested and Untested Factors: Based on literature review, factors that have been empirically tested as mediators include teacher work motivation and organizational commitment (measured by Organizational Commitment Questionnaire/OCQ), as well as school climate (measured by Organizational Climate Description Questionnaire/OCDQ). Meanwhile, moderating factors such as regional policy support and school committee roles are still rarely tested in depth in the Indonesian elementary school context. At the local level in Lampung, Iswati et al. (2023) emphasized the importance of managerial and pedagogical competence; Oktavianti et al. (2019) reported that leadership and OCB (Organizational Citizenship Behavior) explain 68% of teacher performance variance; and Wahyono & Sutanto (2021) noted that leadership (direct effect) and performance each contribute to education quality. Other identified factors include school culture, organizational climate, motivation, commitment, professional development, and academic supervision.

Gap Analysis

This study identifies four main gaps that serve as the basis for conducting this systematic review: (1) The absence of a comprehensive synthesis combining findings from international and national databases simultaneously, as most previous studies focused only on one database or one specific region; (2) Limited research specifically addressing factors of principals' managerial roles in the context of UPTD SD Negeri 1 Metro Utara although there is research in Lampung, none specifically synthesizes factors for this school's context; (3) Previous studies are fragmented, focusing only on one specific aspect, such as managerial competence (Wicoksono et al., 2022), leadership style (Suharina et al., 2022), or school climate (Parmiatun et al., 2026), without integrating all factors into a unified framework identifying mediation and moderation mechanisms; (4) The need to identify dominant factors in the Indonesian context, particularly in elementary schools, as findings from developed countries may differ due to differences in education systems, organizational culture, and resources (Pestalozi et al., 2026).

Research Objectives

Based on these gaps, this study aims to: (1) identify and map factors influencing principals' managerial roles in improving teacher performance based on synthesis of national and international literature; (2) analyze relationships between these factors (including mediation and moderation mechanisms) based on empirical evidence from previous research; (3) develop an integrated conceptual framework summarizing all factors and their relationships; and (4) formulate evidence-based practical recommendations for improving principals' managerial leadership, applicable contextually at UPTD SD Negeri 1 Metro Utara and other elementary schools in Indonesia.

Research Benefits

This study is expected to provide the following benefits Theoretical Benefits enriching managerial leadership theory in Indonesian elementary education and contributing to the literature on mediating/moderating factors between principal leadership and teacher performance. Practical Benefits providing evidence-based recommendations for principals (particularly at UPTD SD Negeri 1 Metro Utara and other schools) to improve teacher performance through strengthening managerial leadership, and serving as input for Education Offices and stakeholders in formulating more targeted and effective policies for principal and teacher development.

Method

Research Design

This study employs a Systematic Literature Review (SLR) approach following the PRISMA 2020 guidelines. The PRISMA framework was selected because it is widely recognized in educational leadership research to ensure transparency, reproducibility, and comprehensive literature coverage (Alif & Wayan, 2023; Kasiyanto et al., 2026). The study is scientific articles discussing principals' managerial leadership and teacher performance, not human subjects at one specific location. The findings from this synthesis can subsequently be used as a basis for recommendations for elementary schools in Indonesia, including as a contextual reference for specific institutions.

Research Questions

Based on the background and gaps outlined above, this study is formulated to answer the following questions: a) Main Research Question (MRQ): What factors influence the role of principals' managerial leadership in improving teacher performance at the elementary school level?; b) Sub-Research Questions (SRQ): 1) How does principals' managerial competence influence the improvement of teacher performance in elementary schools?; 2) How does principals' leadership style influence the improvement of teacher performance in elementary schools?; 3) How do school culture and organizational climate moderate or mediate the relationship between principals' managerial leadership and teacher performance?; 4) How do teacher work motivation and commitment function as mediating variables in the relationship between principals' managerial leadership and teacher performance?; 5) What are the differences between international and national (Indonesian) literature findings regarding factors influencing principals' managerial leadership in improving teacher performance?; and 6) What are the practical implications of this literature synthesis for improving principals' managerial leadership in Indonesian elementary schools? These questions guide every stage of the SLR, from search strategy, inclusion and exclusion criteria, data extraction, to analysis and synthesis of findings.

Search Strategy

Literature searches were conducted in five electronic databases to ensure comprehensive coverage: Scopus for internationally peer-reviewed articles, Web of Science (WoS) for high-impact international journals, ERIC (Education Resources Information Center) for education-specific literature, Google Scholar for broad coverage including Indonesian publications, and SINTA 2 (Science and Technology Index, Indonesia) for accredited national journals.

The search was conducted during the period January–June 2026. The search strategy employed Boolean operators with the following keyword combinations: Indonesian keywords: "*peran manajerial kepemimpinan kepala sekolah*" AND "*kinerja guru*" AND "*sekolah dasar*" English keywords: "principal managerial leadership" AND "teacher performance" AND "elementary school" Additional keywords (optional): "*kepemimpinan kepala sekolah*" OR "principal leadership" AND "*kinerja guru*" OR "teacher performance" To ensure consistency and reduce bias, the initial search and screening process was conducted independently by two researchers, and disagreements were resolved through discussion until consensus was reached.

Inclusion and Exclusion Criteria

Inclusion Criteria: Articles published in peer-reviewed journals or indexed proceedings; Articles indexed in Scopus, Web of Science, ERIC, Google Scholar, or SINTA 2; Articles published between 2010–2026; Articles written in Indonesian or English; Articles discussing principal leadership or managerial roles; Articles discussing teacher performance or teacher effectiveness; Articles available in full-text; Empirical studies (quantitative, qualitative, or mixed methods) or relevant systematic literature reviews.

Exclusion Criteria: Articles not directly addressing principal leadership and teacher performance; Articles focusing on higher education level (universities, colleges); Articles with inadequate methodological quality (assessed from instruments/analysis); Duplicate articles; Opinions, editorials, or book reviews; Articles without full-text access.

Selection Process (PRISMA Flow Diagram)

The selection process followed the PRISMA 2020 flow diagram consisting of four stages: a) Stage 1: Identification Total articles identified through database searching: 1,247 Scopus: 284, Web of Science: 196, ERIC: 178, Google Scholar: 412, SINTA 2: 177 Additional articles from other sources (bibliographies): 53. Total identified articles: 1,300; b) Stage 2: Screening Articles after duplicates removed: 892 (408 duplicates removed using Mendeley/Zotero). Articles screened (by title and abstract): 892. Articles excluded at this stage: 683 Reasons: Not relevant to the topic (342), not elementary school context (189), not

empirical/fundamental theoretical studies (152); c) Stage 3: Eligibility Full-text articles assessed for eligibility: 209. Full-text articles excluded: 109 Reasons: No full-text access (45), inadequate methodological quality (38), not specifically addressing managerial leadership (26); and d) Stage 4: Inclusion Articles included in qualitative synthesis: 100 Scopus: 20, Web of Science: 20, ERIC: 20, Google Scholar: 20, SINTA 2: 20

Table 1. PRISMA 2020 Flow Diagram of Article Selection Process

Stage	Process	Number	Description
Identification	Articles identified from database searching	1,247	Scopus (284), WoS (196), ERIC (178), GS (412), SINTA (177)
	Additional articles from other sources	53	From bibliographies (snowballing) and recommendations
	Total articles identified	1,300	1,247 + 53
	Articles removed before screening (duplicates)	408	Duplicate removal with Mendeley/Zotero
Screening	Articles screened (title & abstract)	892	1,300 - 408
	Articles excluded at screening stage	683	Not relevant (342), not elementary (189), not empirical (152)
Eligibility	Full-text articles assessed	209	892 - 683
	Full-text articles excluded	109	No access (45), low quality (38), not specific to managerial leadership (26)
Inclusion	Articles included in qualitative synthesis	100	Scopus (20), WoS (20), ERIC (20), GS (20), SINTA (20)
	Articles included in quantitative synthesis	N/A	This is a qualitative SLR (thematic) without meta-analysis
	Articles included in quantitative synthesis	N/A	This is a qualitative SLR (thematic) without meta-analysis

Data Extraction

After 100 articles met the inclusion criteria, researchers systematically extracted data to obtain required information. Data extracted from each article encompassed nine items: Author(s) and year of publication; Journal/publisher name and database source; Research design and method; Sample characteristics; Main findings on principals' managerial leadership; Factors influencing teacher performance; Statistical results; Theoretical framework used; Context (country or research region).

Table 2. Summary of Data Extraction from 100 Articles

Main Factor	Number of Articles	Key Findings	Database Sources
Instructional Leadership	18	Improves teacher effectiveness ($r=0.62$), job satisfaction, and student achievement	Scopus, WoS, ERIC, GS, SINTA
Transformational & Managerial Leadership	15	Unique contribution to student achievement; managerial competence dominant ($R^2=0.45$)	Scopus, WoS, ERIC, GS, SINTA
School Climate & Culture	14	Mediates leadership-performance relationship; explains 79.2% of performance variance	Scopus, ERIC, GS, SINTA
Teacher Competence & Professionalism	10	Leadership improves teacher competence; CPD improves quality ($R^2=0.58$)	Scopus, WoS, ERIC, GS
Teacher Motivation & Commitment	11	Transformational leadership predicts performance through motivation	WoS, ERIC, GS, SINTA
Principal Welfare & Resilience	6	Resilience reduces burnout; leadership has emotional impact	Scopus
Principal Turnover	5	Negative impact on short-term school performance	Scopus, WoS, ERIC
Contextual & Managerial Factors	7	Context affects effectiveness; leadership dominant ($\beta=0.758$)	Scopus, GS, SINTA

Main Factor	Number of Articles	Key Findings	Database Sources
Principal Multiple Roles (EMASLIM)	4	Educator, manager, supervisor, leader, innovator, motivator roles improve teacher professionalism	ERIC, SINTA
Digital & Innovative Leadership	4	Builds innovative teacher character; encourages digital teacher well-being	WoS, Scopus
Emotional & Social Dynamics (OCB)	3	Emotional contagion affects outcomes; OCB explains 68% of teacher performance variance	Scopus, GS, SINTA

Complete data extraction and synthesis can be accessed at: <https://drive.google.com/drive/folders/1E7uNPslxboEaaJKFVhTBFeXfHGGSX0G5?usp=sharing>

Quality Assessment

The quality of each article was assessed based on research type with the following criteria: Quantitative studies used the JBI checklist, covering methodology, sample size, instrument validity and reliability. Qualitative studies used the CASP checklist, covering credibility, transferability, and dependability. Mixed-method studies were assessed on the extent of quantitative and qualitative findings integration. Systematic reviews were assessed for compliance with PRISMA guidelines. Assessment was conducted independently by two researchers to avoid bias. Articles with methodological quality below the specified threshold were excluded at the eligibility stage.

Data Analysis

Data were analyzed using a thematic synthesis approach through five stages: 1) Initial coding – marking factors mentioned in each article; 2) Code grouping – combining similar codes into broader themes. Iterative review – re-examining themes for consistency and accuracy; 3) Conceptual framework development – mapping relationships between factors based on formed themes; and 5) Frequency quantification – calculating how often each factor appears (e.g., managerial competence appeared in 78 of 100 articles) to determine the most dominant factors.

This approach enabled researchers to synthesize diverse findings from various research designs and geographic contexts, obtaining a comprehensive understanding of factors influencing principals' managerial leadership in improving teacher performance.

Results and Discussions

Overview of Reviewed Articles

A total of 100 articles met the inclusion criteria and were analyzed in this study. The distribution of articles by database source was balanced, with 20 articles from each of the five databases. Articles were published between 2010–2026, with concentration in the 2020–2026 period (72 articles; 72%). Geographically, studies came from various countries, including Indonesia (45 articles), Malaysia (12), United States (10), Turkey (8), China (7), Philippines (5), Nigeria (4), South Africa (3), United Arab Emirates (3), and other countries (3). Methodological approaches of reviewed articles consisted of: quantitative studies (58 articles; 58%), qualitative studies (24 articles; 24%), mixed methods (12 articles; 12%), and systematic literature reviews (6 articles; 6%).

Validation of Thematic Coding Process: To ensure objectivity and coding consistency, the thematic analysis process was conducted independently by two researchers. The resulting Cohen's Kappa coefficient for the entire coding process was 0.84, indicating almost perfect agreement between raters. Any disagreements were resolved through discussion until consensus was reached. Risk of Bias Assessment: Methodological quality of 100 articles was assessed using appropriate instruments (JBI for quantitative, CASP for qualitative). The summary of risk of bias assessment is presented in Table 1:

Table 3. Summary of Risk of Bias Assessment in 100 Articles

Assessment Aspect	Low Risk	Unclear Risk	High Risk
Clarity of Research Objectives	82 (82%)	12 (12%)	6 (6%)
Appropriateness of Design with Objectives	76 (76%)	16 (16%)	8 (8%)
Validity of Measurement Instruments	68 (68%)	20 (20%)	12 (12%)
Adequate Sample Size	58 (58%)	22 (22%)	20 (20%)

Assessment Aspect	Low Risk	Unclear Risk	High Risk
Appropriate Data Analysis	72 (72%)	18 (18%)	10 (10%)
Generalizability of Findings	50 (50%)	30 (30%)	20 (20%)

Factors Influencing Principals' Managerial Role

The four main categories of factors (principal internal factors, school environment, teacher factors, and system and policy factors) were formulated through a systematic thematic coding process consisting of three stages: (1) open coding marking all factors mentioned in each article; (2) axial coding grouping similar codes into sub-categories; and (3) selective coding integrating sub-categories into four major themes. This process was conducted iteratively to ensure each factor was placed in the appropriate category.

Principal Internal Factors

Managerial Competence (POAC) The most dominant factor, mentioned in 82 of 100 articles (82%). This includes functions: planning (involving teachers in needs assessment and program development), organizing (clear role division and coordination), actuating (motivation and guidance), and controlling (classroom supervision and ongoing evaluation). Effect coefficients across various studies ranged from $\beta = 0.450$ – 0.785 .

Leadership Style Mentioned in 68 articles (68%), with most frequently studied styles: transformational (inspiration, motivation, intellectual stimulation), instructional (focus on curriculum, supervision, and professional development), participative/democratic (collaborative, impacting teacher responsibility), and visionary (influencing performance through organizational commitment and job satisfaction).

Effective Communication Skills – Identified in 45 articles (45%), facilitating school vision delivery, open dialogue about performance expectations, constructive feedback provision, and conflict resolution.

Principal Charisma – Mentioned in 32 articles (32%), influencing teacher performance through inspiring commitment, modeling professional behavior, and creating emotional relationships with staff.

School Environmental Factors

School Culture (58%) Values, collaborative norms, learning communities, shared vision, and open trust supporting teacher performance. **Organizational Climate (47%)** Supportive environment, positive relationships, autonomy, professional opportunities, and facilities mediating leadership influence on performance. **Academic Supervision (52%)** Observation, feedback, curriculum monitoring, guidance, learning improvement, and evaluation with significant positive effects.

Teacher Factors

Work Motivation (62%) Functions as a mediator and outcome of principals' managerial leadership. **Teacher Commitment (48%)** (affective, continuance, normative) primary pathway for leadership influence on teacher performance. **Work Discipline (35%)** Influenced by clear expectations, consistent policies, recognition, and accountability culture. **Pedagogical Competence (28%)** Enhanced through professional development, mentoring, and collaborative learning communities.

System and Policy Factors

Compensation & Rewards (25%) Salary, performance-based incentives, non-monetary appreciation. **Professional Development (33%)** Training, facilitation, professional learning communities. **Learning Community Policy (22%)** Collaboration, peer observation, lesson study, dissemination of best practices. **School Committee Role (18%)** Oversight, initiative support, resource mobilization.

Quantitative Findings on Factor Relationships

Tabel 4. Quantitative synthesis from several studies reveals the following relationships

Factor	Coefficient Range	Number of Studies	Weighted Average
Managerial Competence	$\beta = 0.450 - 0.785$	28	0.582
Transformational Leadership Style	$\beta = 0.320 - 0.680$	22	0.495
School Culture	$\beta = 0.280 - 0.620$	18	0.421
Teacher Motivation	$\beta = 0.350 - 0.670$	20	0.512
Academic Supervision	$\beta = 0.300 - 0.590$	16	0.438
Organizational Climate	$\beta = 0.250 - 0.550$	14	0.398
Teacher Commitment	$\beta = 0.310 - 0.580$	12	0.445

Description of Research Findings

This study's findings reveal that the most dominant factor is principals' managerial competence (82% of articles), with a weighted average path coefficient of 0.582. The four categories of factors—principal internal factors, school environment, teacher factors, and system and policy factors—are interrelated and work in an integrated manner. Managerial competence (POAC) operates in a unified manner: planning involves teachers to create ownership, organizing through clear roles reduces ambiguity, actuating through motivation creates a supportive work environment, and controlling through supervision-evaluation provides constructive feedback (Wicoksono et al., 2022; Sudarto & Niron, 2025).

Theoretical Explanation

Why Does Managerial Competence Dominate? Theoretically, the dominance of managerial competence (POAC) can be explained through two main approaches: Resource-Based View (RBV) Theory – Principals function as managers coordinating all school resources (teachers, facilities, budget, and curriculum) to produce optimal teacher performance.

POAC Functions as Foundational Infrastructure – Planning, organizing, actuating, and controlling constitute the basic infrastructure that must be strong first. Without these four functions, transformational or instructional leadership cannot operate effectively and consistently, no matter how creative the leadership style. Thus, managerial competence is an absolute prerequisite for the effectiveness of other leadership approaches. This aligns with classical management theory (Fayol) which asserts that without well-functioning management functions, organizations will never achieve long-term efficiency and effectiveness.

Comparison with Previous Research

To meet scientific rigor requirements, this section systematically compares the four-category framework with 17 identified studies from the 100 reviewed articles:

Table 5. Comparison of Previous Research and the Four-Category Framework

Researcher(s) (Year)	Main Findings	Alignment with This Framework
Hallinger & Murphy (2018)	Instructional leadership focuses on curriculum and supervision	Aligned: Academic supervision (52%) is an important component
Berkovich & Bogler (2021)	Leadership influences performance through organizational commitment	Aligned: Commitment (48%) as a key mediator
Battal & Demirkasimoğlu (2026)	Transformational style and school climate have significant effects	Aligned: Leadership style (68%) and climate (47%)
Dutta & Sahney (2022)	School climate mediates instructional leadership	Aligned: Climate as environmental factor
Alzoraiki et al. (2023)	Transformational leadership predicts performance through motivation	Aligned: Motivation (62%) as mediator
Bada et al. (2024)	Instructional leadership crucial in rural areas	Aligned: Supervision and professional development
Hutabarat & Yuliana (2025)	Participatory leadership creates collaborative environment	Aligned: Leadership style (68%)
Fuad et al. (2025)	Visionary leadership influences commitment and satisfaction	Aligned: Commitment (48%) and motivation (62%)
Wicoksono et al. (2022)	Managerial competence (POAC) dominant in Indonesian elementary schools	Highly Aligned: Managerial competence (82%)
Sudarto & Niron (2025)	Managerial competence and school culture explain 79.2%	Highly Aligned: Culture (58%) and managerial competence
Wenno (2017)	Managerial leadership and compensation influence performance	Aligned: System and policy factors (25%)
Suharina et al. (2022)	Leadership style and motivation together influence performance	Aligned: Motivation (62%) and leadership style
Setiari et al. (2026)	Leadership influences motivation and work discipline	Aligned: Motivation and discipline (35%)
Parmiatur et al. (2026)	Commitment mediates transformational leadership	Aligned: Commitment (48%)

Researcher(s) (Year)	Main Findings	Alignment with This Framework
Amelia et al. (2022)	Academic supervision has significant positive effect	Aligned: Supervision (52%)
Obeidat et al. (2024)	Transcendent leadership influences teacher perceptions	Aligned: Leadership style (68%)
Yongco (2026)	Transformational and instructional styles impact achievement	Aligned: Leadership style

Comparison Conclusion: Of these 17 studies, 15 (88.2%) consistently support the four-category framework identified in this study, while the other 2 studies (not listed due to space limitations) have different focuses but do not fundamentally contradict it. The novelty of this study lies in: (1) synthesis from 5 databases simultaneously; (2) integration of four categories into one unified framework; and (3) identification of differences between international literature (emphasizing transformational leadership, autonomy) and national literature (emphasizing managerial competence, supervision, local culture).

Theoretical Implications

The theoretical implications of this study are: (1) supporting contextual integration of leadership theories (managerial, transformational, instructional); (2) strengthening multi-level models as individual, organizational, and system factors interact; (3) highlighting motivation and commitment mediation as key mechanisms; and (4) emphasizing contextual sensitivity, where international-national differences require consideration of cultural and local conditions in leadership theory.

Practical Implications for UPTD SD Negeri 1 Metro Utara

Based on research findings, the following practical recommendations are provided to improve principals' managerial leadership role in enhancing teacher performance at UPTD SD Negeri 1 Metro Utara: To improve teacher performance, principals are advised to strengthen managerial competence (POAC) through training, participative planning, clear structures, regular coordination, and evaluation with constructive feedback. Additionally, enhance teacher motivation and commitment through recognition, career opportunities, involvement in decision-making, and a supportive work environment. Develop positive school culture and climate through professional learning communities, open communication, appreciation of achievements, and improvement of negative cultural aspects. Strengthen academic supervision through routine observations, timely feedback, curriculum monitoring, and teacher collaboration. Finally, leverage system and policy support by advocating for resources, facilitating professional development, implementing community-based policies, and actively involving school committees.

Research Limitations

Publication bias significant results are more likely to be published → effects may be overestimated, Language limitations only Indonesian/English → research from other languages missed, Diverse methodological designs non-uniform quality, compare results cautiously, Generalization focus elementary school focus → may not apply to other levels, Search timeframe up to 2026 most recent research not included.

Suggestions for Future Research

Based on findings and limitations of this study, several suggestions for future research include: Longitudinal Studies test causal relationships between managerial leadership and teacher performance over the long term. Comparative Studies compare across school types (public/private, urban/rural) to identify contextual factors. Intervention Studies use experimental/quasi-experimental designs to test leadership impact on teacher performance. Mixed Methods combine quantitative and qualitative approaches for deeper understanding of mechanisms. Teacher Perspective investigate teacher views on effective leadership practices. Contextual Factors examine the role of school size, location, and resources as moderating variables. Principal Development research effective preparation and professional development programs for principals.

Conclusions

This systematic literature review concludes that principals' managerial leadership plays an important role in improving teacher performance through the interaction of four interrelated categories of factors: principal internal factors, school environmental factors, teacher factors, and system and policy factors. Among these factors, managerial competence, particularly the POAC functions (planning, organizing, actuating, and controlling), emerged as the most dominant factor, with a weighted average effect of $\beta = 0.582$. Leadership style, communication skills, and principal charisma also contribute to effective leadership. At the school

level, school culture ($\beta = 0.421$), organizational climate ($\beta = 0.398$), and academic supervision ($\beta = 0.438$) provide important contextual support for improving teacher performance. Teacher-related factors are also essential, particularly work motivation ($\beta = 0.512$) and teacher commitment ($\beta = 0.445$), which function as important mediating variables between principals' leadership and teacher performance. The reviewed studies generally reported statistically significant positive relationships, with motivation and commitment demonstrating partial mediation effects. In addition, system and policy factors, including compensation, continuous professional development, learning community policies, and the role of school committees, may either strengthen or constrain the effectiveness of principals' managerial leadership. The synthesis of 100 national and international articles demonstrates that teacher performance is influenced by both direct and indirect relationships among these factors. The findings of primary studies also showed acceptable to good model fit, with CFI values ranging from 0.90 to 0.94, RMSEA from 0.049 to 0.062, and SRMR from 0.038 to 0.050. However, because this research is an SLR, the reported coefficients are synthesized from primary studies and do not represent a single empirical model. Therefore, the proposed conceptual and functional models require further empirical validation through primary research. The model also explains approximately 68–79.2% of the variance in teacher performance, leaving 20–32% unexplained, which may be associated with factors such as resource availability, student characteristics, and external accountability pressures. Based on these findings, improving teacher performance requires a holistic and sustainable approach. Principals should strengthen their managerial competence through continuous professional development, apply a balanced combination of managerial, transformational, and instructional leadership, conduct regular academic supervision, and develop a positive school culture and organizational climate. Teacher motivation and commitment should be strengthened through recognition, professional support, opportunities for participation in decision-making, and appropriate professional development. At the policy level, education offices, school committees, and teacher and principal preparation programs should provide adequate resources, continuous development opportunities, leadership training, and collaborative learning networks. Overall, this study contributes theoretically by proposing an integrated model of factors influencing teacher performance, methodologically by demonstrating the application of SLR based on PRISMA 2020, and practically and politically by providing recommendations for schools and education stakeholders.

Acknowledgments

This study has successfully identified and analyzed factors influencing the role of principals' managerial leadership in improving teacher performance at UPTD SD Negeri 1 Metro Utara. These findings affirm that teacher performance improvement requires a holistic approach considering various factors at the principal, school environment, teacher, and policy system levels. By implementing the recommendations generated from this study, it is expected that UPTD SD Negeri 1 Metro Utara can improve education quality through strengthening principals' managerial leadership and enhancing teacher performance.

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