



## Evaluating the Effectiveness of Principal Management in Improving Elementary School Quality: A Systematic Literature Review

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### ABSTRACT

**Purpose of the study:** This study aims to evaluate the effectiveness of principal management in improving the quality of elementary schools by synthesizing and critically examining evidence from previous research. The study emphasizes an evaluative perspective to identify which leadership strategies contribute most significantly to school quality improvement.

**Methodology:** This study employs a systematic literature review (SLR) using PRISMA guidelines. A total of 13 relevant articles published in reputable journals were selected based on predefined inclusion and exclusion criteria. The data were analyzed using a thematic evaluative synthesis approach to assess the effectiveness of various principal management practices.

**Main Findings:** The results indicate that instructional leadership, data-driven management, and collaborative leadership approaches demonstrate the highest effectiveness in enhancing teacher performance, learning quality, and student outcomes. In contrast, administrative and routine managerial practices show limited impact when implemented without integration with instructional and transformational strategies. The findings also reveal that the majority of previous studies are dominated by qualitative and context-specific approaches, limiting generalizability and the strength of causal conclusions.

**Novelty/Originality of this study:** This study contributes to the literature by shifting the focus from descriptive synthesis to an evaluative analysis of principal management effectiveness. It provides a comprehensive evaluation framework that integrates leadership practices with school quality outcomes. The study also offers practical implications for educational evaluation and policy by emphasizing the importance of evidence-based leadership and continuous performance assessment in improving elementary school quality.

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## 1. INTRODUCTION

Educational quality is a key indicator in evaluating the success and accountability of an education system, particularly at the elementary school level, which serves as the foundational stage for students' cognitive, affective, and psychomotor development. In the context of educational evaluation, school quality is not only measured by student outcomes but also by the effectiveness of school management and leadership practices in achieving educational goals. Elementary education plays a strategic role in shaping students'

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literacy, numeracy, and character, which determine their success at subsequent levels of education. Therefore, improving the quality of elementary education is not only a developmental priority but also a central concern in ensuring accountability and effectiveness in educational systems [1]–[3].

In this context, the school principal holds a strategic role as an educational leader and manager responsible for ensuring that school processes operate effectively and meet established quality standards. Principals are expected to function not only as administrators but also as instructional leaders who guide teachers in improving classroom practices and student learning outcomes. From an educational evaluation perspective, the effectiveness of principal management can be assessed through its impact on teacher performance, school climate, and student achievement. Previous studies have demonstrated that effective principal leadership contributes significantly to improving educational quality and school effectiveness [4]–[7]. Furthermore, principals play a critical role in fostering a culture of continuous improvement and accountability within schools, which is essential for sustaining long-term educational quality.

However, in practice, elementary school management still faces various complex challenges that affect its effectiveness. These include limited resources, disparities in teacher competencies, and increasing demands for the integration of technology in teaching and learning processes. In addition, rapid changes in educational policies and the need to implement adaptive curricula create additional pressures for school principals. These challenges often result in an imbalance between administrative responsibilities and instructional leadership roles, thereby affecting the overall effectiveness of school management [8], [9]. Such conditions highlight the importance of evaluating how principal management practices contribute to school quality rather than merely describing their roles.

Along with the growing body of research in educational management, numerous studies have examined the role of principals in improving school quality [10]–[13]. These studies address various leadership approaches, such as transformational leadership, instructional leadership, and school-based management. However, most of these studies remain descriptive and context-specific, focusing on identifying leadership practices rather than systematically evaluating their effectiveness. As a result, the existing literature does not yet provide a comprehensive and evidence-based understanding of which principal management strategies are most effective in improving elementary school quality.

From a theoretical perspective, this study is grounded in the concepts of educational evaluation, school effectiveness, and accountability. Educational evaluation emphasizes the systematic assessment of programs and practices to determine their effectiveness in achieving intended outcomes. The concept of school effectiveness highlights the importance of leadership, teaching quality, and school climate in influencing student achievement. Meanwhile, accountability in education requires that school leaders demonstrate measurable outcomes and continuous improvement based on evidence. These theoretical perspectives provide a foundation for analyzing principal management not only as a set of roles and functions but also as practices that must be evaluated in terms of their impact on school quality. Based on these considerations, the main research gap lies not only in the fragmented nature of previous studies but also in the lack of systematic evaluation of the effectiveness of principal management in improving elementary school quality. Existing studies have not sufficiently integrated findings into an evaluative framework that links leadership practices with measurable educational outcomes. Therefore, a systematic literature review (SLR) with an evaluative approach is needed to synthesize and critically assess the effectiveness of principal management strategies.

The novelty of this study lies in its shift from a descriptive synthesis of literature toward an evaluative analysis of principal management effectiveness. Unlike previous reviews that primarily summarize findings, this study develops an evaluative perspective to identify which leadership practices contribute most significantly to school quality improvement. Furthermore, this study provides an integrated framework that connects principal management practices with educational evaluation and school effectiveness. The urgency of this study is driven by the increasing demand for evidence-based educational policies and leadership practices. In the context of ongoing educational reforms and accountability systems, policymakers and practitioners require clear evidence regarding the effectiveness of principal management in improving school quality. Therefore, this study aims to evaluate and synthesize research findings on principal management in elementary education, identify effective strategies, and provide implications for educational evaluation and policy development.

## 2. RESEARCH METHOD

This study employed a qualitative approach using a Systematic Literature Review (SLR) with an evaluative perspective to examine the effectiveness of principal management in improving the quality of elementary education. A systematic review enables researchers to identify, select, evaluate, and synthesize relevant studies in a structured and rigorous manner [14]–[17]. Unlike traditional reviews, this study emphasizes a critical and evaluative analysis of existing research rather than merely summarizing previous findings. The data sources consisted of scientific articles obtained through a systematic search of Google Scholar and national journal portals. The article selection process followed the PRISMA (Preferred Reporting Items for Systematic

Reviews and Meta-Analyses) framework to ensure transparency, consistency, and methodological rigor in the selection procedure [18]-[21]. PRISMA provides updated reporting guidelines that enhance the clarity and reproducibility of systematic reviews across disciplines.

At the identification stage, an initial search using the keywords “principal management,” “educational leadership,” and “elementary school management” yielded 120 articles. During the screening stage, duplicate records were removed, and a title and abstract review reduced the number to 45 relevant articles. In the eligibility stage, full-text screening was conducted using predefined inclusion and exclusion criteria. The inclusion criteria were: studies focusing on principal management or leadership, conducted at the elementary school level, employing empirical or literature-based research designs, published within the last 5–10 years, and available in full text. The exclusion criteria included irrelevant studies, non-scientific articles, and studies with incomplete data or discussion. As a result, 20 articles met the eligibility criteria. In the final selection stage, 13 articles were selected based on their relevance, methodological rigor, and completeness of reported findings. These 13 articles are considered representative as they reflect diverse research contexts, methodological approaches, and leadership perspectives, enabling a comprehensive evaluation of principal management practices.

To ensure the reliability of the findings, a quality assessment was conducted for each selected study. The assessment criteria included: clarity of research objectives, appropriateness of research design, adequacy of data collection methods, rigor of data analysis, and validity of conclusions. In addition, each study was examined for potential bias, including sample limitations, contextual constraints, and methodological weaknesses. This process enabled the classification of studies based on their level of evidence and strengthened the evaluative synthesis. Data analysis employed an evaluative thematic synthesis approach, which integrates thematic analysis with an assessment of effectiveness across studies. The analysis was conducted in three stages: data reduction by extracting key information such as research objectives, methods, findings, and outcomes; data display through comparison matrices to identify patterns and relationships; and evaluative synthesis to assess the relative effectiveness of different principal management strategies. This approach extends beyond conventional content analysis by systematically comparing findings across studies to determine which strategies demonstrate stronger empirical support. The research procedure followed the PRISMA stages : identification, screening, eligibility, and inclusion [21]-[23]. To enhance the validity and credibility of the findings, source triangulation was applied by comparing results from multiple studies with different methodologies and contexts. This approach ensures that conclusions are based on consistent patterns across studies rather than a single source. The final synthesis was used to develop integrative and evidence-based implications for evaluating principal management in improving elementary school quality.

### 3. RESULTS AND DISCUSSION

This section presents the results of the systematic literature review and discusses the key findings derived from the selected studies. The analysis focuses on identifying patterns, trends, and relationships across the literature related to principal management in improving the quality of elementary education. The discussion is organized into several thematic areas to provide a comprehensive understanding of the topic.

#### 3.1. Research Trend in Principal Mangement

To provide a clearer overview of the research trends in principal management, a synthesis of selected studies is presented in Table 1. This table summarizes the authors, methodologies, research focus, and main findings of each study, enabling a systematic comparison of patterns, approaches, and key results across the literature.

Table 1. Research Trend in Principal Management

No	Authors & Year	Methodology	Research Focus	Main Findings
1	Turisia et al. [24]	Quantitative (regression)	Learning outcomes	Key findings: Significant effect ( $R^2 = 64.1\%$ ) Type of Strategy: Data-driven management Effectiveness level: High Strength of evidence: High Bias Limitations: Limited scope variables
2	Aydin et al. [25]	Quantitative (ML-SEM)	Leadership and learning outcomes	Key findings: Indirect effect via mediators Type of Strategy: Distributed

3	Rini et al. [26]	Quantitative	21st-century leadership competencies	<p>leadership Effectiveness level: High Strength of evidence: High Bias Limitations: Complex model, indirect effect Key findings: Human skills dominant Type of Strategy: Leadership skills Effectiveness level: Moderate–High Strength of evidence: high Bias Limitations: Limited variables</p>
4	Anjani & Dafit [27]	Qualitative	Managerial roles of principals	<p>Key findings: POAC functions applied; constraints in facilities &amp; discipline Type of Strategy: Administrative management Effectiveness level: Low–Moderate Strength of evidence: Moderate Bias Limitations: Context-specific, no measurable outcomes</p>
5	Rismayani et al. [28]	Qualitative	Participatory Management	<p>Key findings: Improves collaboration &amp; discipline Type of Strategy: Collaborative leadership Effectiveness level: Moderate Strength of evidence: Moderate Bias Limitations: Limited generalizability</p>
6	Hulkin et al. [29]	Qualitative	Human resource development	<p>Key findings: Training &amp; collaboration improve quality Type of Strategy: HR development Effectiveness level: Moderate Strength of evidence: Moderate Bias Limitations: No impact measurement</p>
7	Badrudin et al. [30]	Literature review	Transformational leadership	<p>Key findings: Promotes innovation Type of Strategy: Transformational leadership Effectiveness level: Moderate Strength of evidence: low Bias Limitations: Non-systematic review</p>
8	Hikmah et al. [31]	Literature review	Role of principals	<p>Key findings: Leadership roles are multidimensional Type of Strategy: General leadership Effectiveness level: low Strength of evidence: low Bias Limitations: Descriptive, not systematic</p>
9	Rasyid et al. [32]	Literature review	Principal policies	<p>Key findings: Improves teacher competence Type of Strategy: Policy-based leadership Effectiveness level: Moderate Strength of evidence: Low Bias Limitations: Non-empirical</p>

10	Dania & Andriani [33]	Qualitative	Instructional leadership	Key findings: Improves teaching & achievement Type of Strategy: Instructional leadership Effectiveness level: Moderate–High Strength of evidence: Moderate Bias Limitations: Small sample size
11	Fitria and Marta [34]	Qualitative	School-Based Management (SBM)	Key findings: Improves effectiveness, limited by funding Type of Strategy: SBM Effectiveness level: Moderate Strength of evidence: Moderate Bias Limitations: Pandemic context bias
12	Sunaengsih et al. [35]	Mixed (survey)	Principal leadership in effective school management	Key findings: Leadership + system integration Type of Strategy: System-based leadership Effectiveness level: Moderate Strength of evidence: Moderate Bias Limitations: Small sample
13	Shopiana [36]	Qualitative	Communication	Key findings: Improves teacher performance Type of Strategy: Interpersonal leadership Effectiveness level: Moderate Strength of evidence: Moderate Bias Limitations: Local context

The evaluative synthesis of the 13 selected studies reveals variations in both the effectiveness of principal management strategies and the strength of evidence supporting these findings. The analysis indicates that not all studies provide equally strong empirical support, and the effectiveness of principal management depends on the type of strategy implemented. From the perspective of strength of evidence, studies employing quantitative approaches demonstrate stronger empirical validity. For example, Turisia et al. [24] show that principal management has a significant influence on students' learning interest, contributing 64.1% ( $R^2 = 64.1\%$ ), indicating a strong and measurable impact. Similarly, Aydın et al. [25] using advanced statistical methods such as ML-SEM and decision tree analysis, find that principal leadership significantly affects student outcomes, although the relationship is indirect and mediated by instructional practices and school context. In addition, Rini et al. [26], through a quantitative study, identify that human skills are the most dominant factor in effective leadership, further supporting the importance of interpersonal competencies in school management. These studies can be categorized as having high strength of evidence due to their use of statistical analysis and measurable indicators.

In contrast, most of the reviewed studies employ qualitative approaches, which provide contextual and in-depth insights but offer moderate levels of evidence. For instance, Anjani & Dafit [27] describe how principals implement managerial functions such as planning, organizing, and supervision, although their findings are limited by contextual constraints and lack of measurable outcomes. Similarly, Rismayani et al. [28] highlight the effectiveness of participatory management in improving discipline and collaboration, while Hulkan et al. [29] emphasize the role of teacher training and collaboration in improving educational quality. Although these studies provide valuable insights, their findings are not easily generalizable due to limited sample sizes and the absence of quantitative validation. Furthermore, several studies are categorized as having low strength of evidence, particularly those based on non-systematic literature reviews. For example, previous research provides conceptual discussion on transformational leadership and the multidimensional role of school principals, but lacks empirical validation [30]-[31]. Similarly, Rasyid et al. [32] focus on policy-related aspects of principal management, emphasizing teacher competence development through supervision and training, yet their findings remain conceptual and not empirically tested.

From the perspective of effectiveness, the analysis indicates that principal management strategies can be classified into three levels. First, highly effective strategies include instructional leadership, data-driven management, and collaborative or distributed leadership. Dania & Andriani [33] demonstrate that instructional leadership improves teaching quality and student achievement through academic supervision. Likewise, Turisia et al. [24] provide strong evidence that management practices significantly influence student learning outcomes. Meanwhile, Aydın et al. [25] show that distributed leadership contributes to educational outcomes through mediating variables such as motivation and instructional innovation. These findings indicate that strategies directly linked to teaching and learning processes tend to produce stronger impacts. Second, moderately effective strategies include human resource development and school-based management. Fitria and Marta [34] show that School-Based Management (SBM) enhances school effectiveness, although its implementation is constrained by funding limitations and external conditions such as the pandemic. Similarly, Hulkin et al. [29] emphasize that teacher development programs improve educational quality, while Sunaengsih et al. [35] highlight that effective school management depends on the integration of leadership, technology, and organizational systems. However, the effectiveness of these strategies depends on leadership quality and contextual support, making their impact less consistent.

Third, less effective strategies are those focused primarily on administrative and routine managerial functions. Anjani & Dafit [27] show that while principals perform managerial functions effectively, challenges such as limited infrastructure and weak communication reduce their impact on educational quality. This indicates that administrative management alone is insufficient to produce significant improvements in school outcomes. Another important finding is that the effectiveness of principal management is often indirect and mediated by other variables. Aydın et al. [25] demonstrate that leadership does not directly affect student achievement but operates through mediating factors such as instructional quality and school context. Similarly, Turisia et al. [24] show that teacher performance plays a significant role alongside principal management in influencing student learning outcomes. These findings suggest that principal management should be evaluated within a broader system involving multiple interrelated variables.

Additionally, the analysis highlights the importance of communication and interpersonal relationships as supporting factors for effective management. Shopiana [36] emphasizes that two-way communication and collegial relationships significantly improve teacher and staff performance. This finding is consistent with Rini et al. [37], who identify human skills as the most critical leadership competency. Despite these important findings, several limitations are evident across the reviewed studies. Most studies are context-specific and conducted in limited settings, reducing their generalizability. In addition, the dominance of qualitative approaches and the lack of longitudinal research limit the ability to assess long-term effectiveness. These limitations indicate the need for more rigorous and comprehensive studies in the future.

Overall, the findings demonstrate that principal management plays a significant role in improving the quality of elementary education. However, its effectiveness depends on the integration of multiple strategies, the presence of supporting factors, and the strength of empirical evidence. Strategies that focus on instructional processes, data-driven decision-making, and collaboration are consistently shown to be more effective, while purely administrative approaches tend to have limited impact. These results highlight the importance of adopting an evaluative, evidence-based, and systemic approach to principal management in order to achieve sustainable improvements in educational quality.

### 3.2. Principal Management Strategies

Principal management strategies are a key factor in improving the quality of education in elementary schools. Principals function not only as administrators but also as strategic leaders who manage various educational resources effectively and efficiently. Through the implementation of appropriate managerial strategies, such as school program planning, human resource development, strengthening school culture, and instructional supervision. Principals can create a conducive learning environment oriented toward improving student learning outcomes. The literature review indicates that principals play a strategic role in integrating managerial functions with educational leadership, particularly in developing teacher competencies, strengthening school culture, and improving the quality of instructional processes.

The study by Anjani & Dafit [27] shows that principal management operates through the fundamental management functions of planning, organizing, actuating, and controlling (POAC). However, the study also reveals that management effectiveness is influenced by limitations in facilities and infrastructure as well as teacher discipline. This suggests that successful management depends not only on the competence of principals but also on the support of the broader school system. In line with this, Rismayani et al. [28] emphasize the importance of participatory management in improving educational quality. Principals are not only decision-makers but also involve teachers and staff in school management processes. This approach has been shown to enhance a sense of ownership of school programs and positively impact educational quality, particularly in terms of discipline and collaboration. Meanwhile, Fitria and Marta [34] examine School-Based Management (SBM) and find that principals play a crucial role in independently managing curriculum, facilities, and resources.

However, external challenges such as limited funding and crisis conditions (e.g., the pandemic) affect management effectiveness.

Within the context of instructional leadership, Dania & Andriani [33] assert that principals have a strategic role in improving the quality of teaching through academic supervision. Principals who actively monitor and guide instructional processes are able to enhance student achievement, although challenges such as limited time and lack of parental support remain. From a different perspective, Rasyid et al. [32] through a literature review, highlight the importance of principal policies in improving teacher competence. Appropriate policies, such as professional training and performance evaluation, serve as key instruments in enhancing educational quality. This indicates that policy is an integral dimension of principal management. Furthermore, Shopiana [36] emphasize that human resource development, particularly of teachers, is a primary strategy for improving educational quality. Principals act as facilitators by providing opportunities for professional development through training and collaboration, reinforcing the idea that educational quality largely depends on teacher competence.

In a conceptual analysis, Hikmah et al. [31] underline that principals have multidimensional roles as leaders, managers, and innovators. This suggests that principal management is no longer purely administrative but also involves innovative capacities in responding to educational changes. In addition, Rini et al. [37] through a quantitative approach, demonstrate that leadership skills, particularly human skills, are the dominant factor in effective principal management, highlighting the importance of interpersonal aspects in school management. In terms of innovation, Badrudin et al. [30] show that transformational leadership fosters innovation in teaching and learning. Principals act not only as managers but also as agents of change who create more adaptive and relevant learning environments. Meanwhile, Aydin et al. [25] provide a more complex perspective by demonstrating that the influence of principal management on educational quality is indirect, mediated by factors such as instructional innovation and teaching practices. This finding highlights the importance of mediating variables in educational management.

Furthermore, Shopiana [36] emphasizes that principal management in improving educational quality is carried out through effective communication, motivation, and discipline development. Principals build harmonious interpersonal relationships through two-way communication and a collegial approach, which has been shown to improve teacher and staff performance. This finding underscores the importance of communication as a key element of effective management. From a systems perspective, Sunaengsih et al. [35] indicate that effective principal management depends not only on individual leadership but also on the integration of school systems, including technology, school culture, and information systems. Principals who can optimize these aspects are able to enhance overall organizational effectiveness. Finally, the quantitative study by Turisia et al. [24] provides empirical evidence that principal management significantly influences students' learning interest, with a contribution of 64.1%. This finding reinforces that principal management impacts not only internal school processes but also student learning outcomes directly.

Therefore, principal management in improving educational quality cannot be understood as a single dimension. Instead, it represents a multidimensional construct encompassing managerial functions (POAC), instructional and transformational leadership, human resource management (teachers), communication and interpersonal relationships, integration of school systems (technology, culture, information), as well as educational policy and innovation. However, most studies still adopt partial approaches and have not yet developed a comprehensive and integrated management model. In addition, variations in methodological approaches suggest that the relationship between principal management and educational quality can be either direct or indirect. Therefore, further research is needed to develop a more holistic model of principal management.

### **3.3. Evaluation of Principal Management Strategies**

The synthesis reveals that principal management is a multidimensional construct; however, the effectiveness of its strategies varies significantly. From an evaluative standpoint, principal management strategies can be categorized based on their level of effectiveness.

#### **3.3.1. Highly Effective Strategies**

The most effective strategies identified are instructional leadership, data-driven management, and collaborative leadership. Instructional leadership directly influences teaching quality and student learning outcomes by focusing on the core process of education. This finding is supported by Dania & Andriani [33], who demonstrate that instructional leadership improves classroom practices and student achievement through academic supervision. Data-driven management enhances effectiveness by aligning decision-making with measurable performance indicators, thereby strengthening accountability systems. Empirical evidence from Turisia et al. [24] shows that principal management significantly affects students' learning outcomes, with a contribution of 64.1% ( $R^2 = 64.1\%$ ). Collaborative or distributed leadership improves teacher engagement and organizational commitment, creating a supportive learning environment. This is consistent with Aydin et al. [25],

who find that leadership influences educational outcomes through mediating variables such as motivation and instructional practices. Similar findings are also supported by studies on distributed leadership, which emphasize the importance of shared responsibility in improving school effectiveness [28]. These strategies are considered highly effective because they directly or indirectly influence key indicators of school effectiveness, such as teaching quality, student achievement, and school climate [29], [32].

### 3.3.2. Moderately Effective Strategies

Strategies such as human resource development and school-based management (SBM) show moderate effectiveness. These strategies contribute positively to school quality, particularly in improving teacher competence and organizational structure. For instance, Hulkin et al. [29] highlight that teacher training and collaborative professional development improve educational quality, while Rasyid et al. [32] emphasize the role of principal policies in enhancing teacher competence. Similarly, Fitria and Marta [34] show that School-Based Management improves school effectiveness through autonomy and resource management. However, their effectiveness depends on how well they are integrated with instructional and leadership practices. Without strong leadership support, these strategies tend to produce limited outcomes. This is reinforced by Sunaengsih et al. [35], who argue that effective school management requires the integration of leadership, organizational systems, and technology.

### 3.3.3. Less Effective Strategies

Administrative and routine managerial practices are found to have relatively limited impact when implemented in isolation. While these practices are essential for organizational stability, they do not directly contribute to improving teaching and learning processes. This is evident in the study by Anjani & Dafit [27], which shows that although principals perform managerial functions such as planning, organizing, and supervision, challenges related to infrastructure, discipline, and communication limit their impact on educational quality. This finding highlights that management effectiveness cannot rely solely on administrative efficiency but must be linked to instructional improvement and learning outcomes [35].

### 3.3.4. Critical Evaluation

A key finding of this study is that the effectiveness of principal management is not determined by a single strategy but by the integration of multiple approaches. Effective school leadership requires a combination of instructional focus, teacher development, collaboration, and data-based decision-making. This finding aligns with the concept of school effectiveness, which emphasizes the interaction between leadership, teaching quality, and organizational systems [29], [36]. It also supports previous research suggesting that leadership influences student outcomes indirectly through mediating variables such as teacher performance, instructional practices, and school climate [33], [25]. Therefore, principal management should be understood as a systemic and evaluative process, where the success of leadership depends on how well different strategies are integrated to achieve measurable educational outcomes.

## 3.4. Supporting and Inhibiting Factors

The success of principal management in improving the quality of elementary education is influenced by various enabling and constraining factors. Based on the synthesis of 13 studies, these factors include internal aspects of the school, such as principal competence, teacher performance, and organizational culture, as well as external aspects, including limited facilities, stakeholder support, and the dynamics of educational policy. The study by Anjani & Dafit [27] shows that key enabling factors include the systematic implementation of managerial functions and teacher involvement in school programs. However, it also identifies several constraining factors, such as limited infrastructure, low teacher discipline, and weak organizational communication, which hinder optimal improvement in educational quality. Similarly, Rismayani et al. [28] highlight that enabling factors lie in participatory management practices, school-wide discipline, and collaboration between principals and teachers. In contrast, constraining factors include low teacher awareness of professional development and limited involvement of parents and the community in supporting school programs.

In the study by Fitria and Marta [34], enabling factors in School-Based Management (SBM) include school autonomy and the involvement of all school stakeholders. However, the dominant constraints are limited budgets, inadequate facilities, and external conditions such as the pandemic, which affect management effectiveness. Dania & Andriani [33] identify active principal involvement in academic supervision and teacher commitment as key enabling factors, while limited time for supervision and lack of parental support are major constraints. In the study by Rasyid et al. [32], enabling factors are reflected in appropriate policies for teacher professional development through training and performance evaluation, whereas constraints include inconsistency in policy implementation and limited school resources. Hulkin et al. [29] emphasize that enabling factors include teacher professional development programs, a collaborative work environment, and adaptive leadership. Conversely, constraints involve limited access to training, insufficient use of technology, and low

teacher readiness for change. Hikmah et al. [31] identify principals' ability to act as leaders, managers, and innovators as a key enabling factor, while challenges include curriculum changes, limited resources, and the need to adapt to technological advancements. Rini et al. [37] show that interpersonal skills (human skills) are a major enabling factor, whereas limitations in technical and conceptual skills among some principals hinder effective school management.

Badrudin et al. [30] find that transformational leadership is a key enabling factor that promotes instructional innovation, while resistance to change among some teachers and limited systemic support act as constraints. Aydin et al. [25] demonstrate that enabling factors include instructional innovation and effective teaching practices as mediating variables, whereas constraints lie in the complexity of variable relationships and dependence on school context, making the impact of principal management indirect. Shopiana [36] highlights effective communication, collegial approaches, and motivation as key enabling factors, while communication barriers—such as lack of openness and resistance to feedback—serve as constraints. Sunaengsih et al. [35] indicate that enabling factors include the integration of school systems, such as technology, school culture, and information systems, whereas constraints involve limited technological infrastructure, suboptimal information systems, and low organizational readiness for change. Finally, Turisia et al. [24] show that effective principal management and strong teacher performance significantly enhance students' learning interest. However, constraining factors include external variables beyond the study, such as family environment and students' psychological conditions. Therefore, it can be concluded that the main enabling factors of principal management in improving educational quality include effective leadership, human resource development, strong communication, and integrated school systems. Meanwhile, constraining factors include limited resources and insufficient external support. These findings indicate that the success of principal management is highly dependent on the balance between internal and external factors, requiring comprehensive and adaptive strategies to optimize the quality of elementary education.

### 3.5. Implications for Elementary School Management

The implications of principal management for elementary school management illustrate how managerial practices influence the effectiveness of educational delivery. Based on the synthesis of 13 studies, principal management practices do not operate in isolation but rather form an interconnected system linking managerial functions, leadership, human resource management, and the strengthening of overall school systems. This interconnection indicates that effective elementary school management requires a comprehensive and multi-layered approach. Fundamentally, the implications of principal management begin with the application of basic managerial functions: planning, organizing, actuating, and controlling. As demonstrated by Anjani & Dafit [27] and reinforced by Rismayani et al. [28]. However, both studies show that these functions become more effective when integrated with participatory approaches involving teachers and school staff. Thus, the implication for school management is the need to develop governance that is not only structured but also collaborative.

These implications further develop within the context of School-Based Management (SBM), as highlighted by Fitria and Marta [34], which emphasizes the importance of school autonomy in managing resources and educational programs. In this context, principals act as strategic decision-makers capable of aligning policies with local needs. This suggests that elementary school management must be adaptive and context-sensitive. Furthermore, findings from Dania & Andriani [33] indicate that principal management has direct implications for instructional quality through instructional leadership. This means that school management should not be limited to administrative functions but should also focus on improving teaching and learning processes. This implication is strengthened by Hulkin et al. [29] and Rasyid et al. [32], who demonstrate that policies and programs for teacher development are key instruments in improving educational quality. Therefore, elementary school management should prioritize human resource development, particularly teachers.

The interconnection among studies also shows that the effectiveness of principal management is strongly influenced by leadership quality. Hikmah et al. [31], Badrudin et al. [30], and Rini et al. [37] emphasize that principals with transformational leadership capabilities and strong interpersonal skills can create a conducive and innovative work environment. The implication is that elementary school management should focus on strengthening principals' leadership capacities, particularly in communication, motivation, and innovation. A more complex implication is presented by Aydin et al. [25], who reveal that the influence of principal management on educational quality is indirect and mediated by variables such as instructional innovation and teaching practices. This finding reinforces previous studies by highlighting that school management must consider systemic relationships among variables, rather than focusing solely on direct effects.

In terms of implementation, Shopiana [36] shows that effective communication is a key mechanism linking principal management with improved teacher and staff performance. This complements the findings of Rini et al. [37] on the importance of human skills and Hulkin et al. [29] on human resource development. The implication is that elementary school management should position organizational communication as a strategic element. More broadly, Sunaengsih et al. [35] demonstrate that principal management contributes to strengthening overall school systems, including the integration of technology, school culture, and information

systems. This indicates that school management should not focus solely on individuals but must also consider systemic and organizational dimensions. The most concrete implication is presented by Turisia et al. [24], who provide empirical evidence that principal management significantly influences students' learning interest. This finding integrates previous studies by showing that all principal management practices ultimately contribute to improved student learning outcomes.

Therefore, the implications of principal management for elementary school management can be summarized as follows: school management should be based on structured and participatory managerial functions; principals need to develop instructional and transformational leadership; management should prioritize human resource development, particularly teachers; organizational communication should serve as a key mechanism in management implementation; and school management should adopt a systemic approach encompassing technology, culture, and organizational aspects. The ultimate impact of these practices is the improvement of instructional quality and student learning outcomes. Furthermore, these implications indicate that effective school management is not determined by a single factor but by the integration of multiple interconnected dimensions [38]–[40]. Principals serve as key drivers who connect managerial functions, leadership, human resource development, and school systems into a unified framework. Therefore, effective elementary school management requires a comprehensive, adaptive, and system-based approach to achieve optimal educational quality.

### 3.6. Effectiveness, Implication, and Limitations

The findings of this study demonstrate that principal management plays a significant role in improving school quality; however, its effectiveness varies depending on the strategies employed and the contextual conditions in which they are implemented. Strategies that emphasize instructional processes and data-driven decision-making tend to produce stronger and more consistent impacts compared to purely administrative approaches. This is consistent with previous research indicating that leadership practices focused on teaching and learning have a more direct influence on student outcomes and overall school effectiveness [41], [42]. Furthermore, data-driven leadership strengthens accountability and supports evidence-based decision-making, which is increasingly essential in contemporary educational systems [43], [44].

The variation in effectiveness can be explained by the extent to which principal management practices are aligned with core educational processes. Instructional leadership is more effective because it directly targets teaching quality and student learning, which are central to school effectiveness. In contrast, administrative management tends to focus on operational efficiency without directly influencing learning outcomes. This finding supports the argument that leadership has the greatest impact when it is closely connected to classroom practices [45]. In addition, collaborative or distributed leadership enhances effectiveness by promoting shared responsibility, teacher engagement, and collective problem-solving. This type of leadership fosters professional learning communities that support continuous improvement and innovation [46]. Therefore, strategies that integrate instructional focus, collaboration, and data utilization are more likely to produce sustainable improvements in school quality.

The findings of this study are also consistent with a growing body of literature emphasizing the importance of instructional and transformational leadership in improving school effectiveness. Previous studies have shown that instructional leadership has a strong impact on student achievement, while transformational leadership contributes to innovation and organizational change [47], [48]. Moreover, research suggests that the influence of leadership on student outcomes is often indirect and mediated by factors such as teacher performance, school climate, and instructional quality [41]. This reinforces the conclusion that principal management effectiveness should not be evaluated solely based on direct outcomes but must consider broader systemic relationships within schools.

This study provides several important implications for educational policy and practice. First, principal performance should be evaluated using measurable indicators of school effectiveness, including student outcomes, teaching quality, and school climate. This aligns with global trends in educational accountability that emphasize evidence-based evaluation [43], [49]. Second, educational policies should prioritize instructional and data-driven leadership to ensure that school management practices directly support improvements in learning. Third, schools should implement continuous evaluation systems to monitor leadership effectiveness and sustain ongoing improvement. Finally, professional development programs for principals should focus on developing integrated leadership competencies, including instructional, transformational, and data-based management skills [50], [51].

Despite its contributions, this study has several limitations. First, the dominance of qualitative studies limits the generalizability of the findings, as many studies are context-specific and based on relatively small samples. Second, the number of quantitative studies providing strong empirical evidence remains limited, which restricts the ability to draw robust causal conclusions. Third, most studies employ cross-sectional designs that do not capture the long-term effects of principal management on school quality. Finally, the lack of longitudinal

research limits understanding of how leadership practices influence educational outcomes over time. These limitations highlight the need for more rigorous and comprehensive research designs in future studies.

Future research should address these limitations by employing more robust methodological approaches. Quantitative and mixed-method designs are needed to provide stronger empirical evidence regarding the effectiveness of principal management. In addition, future studies should explore mediating and moderating variables, such as teacher motivation, school culture, and instructional innovation, to better understand the mechanisms through which leadership influences school outcomes. Furthermore, there is a need to develop integrated models of principal management that combine multiple leadership dimensions into a unified framework. Longitudinal studies are also essential to examine the sustainability of leadership impacts over time and to provide deeper insights into the dynamic relationship between principal management and educational quality [47], [50].

#### 4. CONCLUSION

This study evaluates the effectiveness of principal management in improving the quality of elementary education through a systematic literature review. The findings indicate that principal management plays a significant role in enhancing school quality; however, its effectiveness varies depending on the strategies employed and the contextual conditions in which they are implemented. Strategies that emphasize instructional leadership, data-driven decision-making, and collaborative approaches demonstrate higher effectiveness, as they are directly or indirectly linked to teaching quality, student outcomes, and school climate. In contrast, administrative and routine managerial practices show limited impact when not integrated with instructional and transformational leadership.

This study highlights that the effectiveness of principal management is not determined by a single approach but by the integration of multiple leadership dimensions within a systemic framework. These findings contribute to the development of educational evaluation by emphasizing the importance of assessing school leadership based on measurable outcomes and evidence-based practices. In addition, this study provides practical implications for policymakers and practitioners to prioritize instructional and data-informed leadership in improving school quality. Despite its contributions, this study is limited by the dominance of qualitative and context-specific studies, which may affect the generalizability of the findings. Therefore, future research is recommended to employ quantitative and mixed-method approaches, explore mediating variables, and conduct longitudinal studies to examine the long-term effectiveness of principal management.

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#### REFERENCES

- [1] I. Bararah, "Pengelolaan sarana dan prasarana pendidikan dalam meningkatkan kualitas pembelajaran," *Jurnal MUDARRISUNA: Media Kajian Pendidikan Agama Islam*, vol. 10, no. 2, pp. 351–370, 2020.
- [2] I. Fathurochman, P. Adilah, A. Anjriyani, and A. Y. Prasetya, "Pengelolaan manajemen sekolah yang efektif," *E-Amal: Jurnal Pengabdian kepada Masyarakat*, vol. 2, no. 2, pp. 1363–1374, 2022.
- [3] S. Azzahra, "Optimalisasi pengelolaan sarana dan prasarana dalam meningkatkan kualitas pembelajaran siswa," *Al-Faizi: Jurnal Politik, Hukum dan Bisnis*, vol. 2, no. 2, pp. 152–165, 2024.
- [4] S. Setiyati, "Pengaruh kepemimpinan kepala sekolah, motivasi kerja, dan budaya sekolah terhadap kinerja guru," *Jurnal Pendidikan Teknologi dan Kejuruan*, vol. 22, no. 2, pp. 200–206, 2014.
- [5] H. Timor, U. S. Saud, and D. Suhardan, "Mutu sekolah: Antara kepemimpinan kepala sekolah dan kinerja guru," *Jurnal Administrasi Pendidikan*, vol. 25, no. 1, pp. 21–30, 2018.
- [6] A. Prayoga, "Pengaruh kepemimpinan kepala sekolah dan budaya sekolah terhadap kinerja guru berdampak pada hasil belajar siswa," *Jurnal Dialogika: Manajemen dan Administrasi*, vol. 1, no. 2, pp. 53–61, 2020.
- [7] R. Siswanto, N. Darmawan, and U. Rudiana, "Peran kepemimpinan dalam manajemen perubahan pendidikan digital: Membangun budaya inovasi di sekolah," *Jurnal Media Akademik*, vol. 2, no. 9, 2024.
- [8] M. R. Alfarisi, "Tantangan yang dihadapi kepala sekolah dan guru dalam melaksanakan supervise," *JISPENDIORA: Jurnal Ilmu Sosial Pendidikan dan Humaniora*, vol. 4, no. 2, pp. 240–250, 2025.
- [9] M. H. Basari, N. Safira, N. H. Fithiyah, and A. Septiana, "Kepala sekolah sebagai administrator dan supervisor," *JIP: Jurnal Ilmu Pendidikan*, vol. 3, no. 6, pp. 580–584, 2025.

- [10] M. Fitrah, "Peran kepala sekolah dalam meningkatkan mutu pendidikan," *Jurnal Penjaminan Mutu*, vol. 3, no. 1, pp. 31–42, 2017.
- [11] H. Manora, "Peranan kepala sekolah dalam meningkatkan mutu pendidikan," *Edification Journal*, vol. 1, no. 1, pp. 119–125, 2019.
- [12] Y. Sutikno, H. Hosan, and I. Irawati, "Peran kepala sekolah dalam meningkatkan mutu pendidikan," *Jurnal Maitreyawira*, vol. 3, no. 1, pp. 1–7, 2022.
- [13] S. H. Sutisna, A. Rozak, and W. R. Saputra, "Peran kepala sekolah dalam meningkatkan mutu pendidikan sekolah," *JIIIP: Jurnal Ilmiah Ilmu Pendidikan*, vol. 6, no. 9, pp. 6895–6902, 2023.
- [14] J. W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: Sage, 2017.
- [15] B. R. Maynard, "Research synthesis methods: A guide for conducting rigorous and relevant reviews," *Research on Social Work Practice*, vol. 35, no. 6, pp. 607–620, 2025.
- [16] N. Ghamrawi *et al.*, "A step-by-step approach to systematic reviews in educational research," *European Journal of Educational Research*, vol. 14, no. 2, pp. 549–566, 2025.
- [17] U. E. Chigbu, S. O. Atiku, and C. C. Du Plessis, "The science of literature reviews: Searching, identifying, selecting, and synthesising," *Publications*, vol. 11, no. 1, p. 2, 2023.
- [18] M. J. Page *et al.*, "The PRISMA 2020 statement: An updated guideline for reporting systematic reviews," *BMJ*, vol. 372, p. n71, 2021.
- [19] T. F. Galvão, G. M. B. Tiguman, and R. Sarkis-Onofre, "The PRISMA 2020 statement in Portuguese," *Epidemiologia e Serviços de Saúde*, vol. 31, p. e2022364, 2022.
- [20] C. Sohrabi *et al.*, "PRISMA 2020 statement: What's new," *International Journal of Surgery*, vol. 88, p. 105918, 2021.
- [21] A. L. Dellinger and S. O. Obare, "The PRISMA 2020 statement: An updated guideline," 2021.
- [22] J. Tetzlaff, M. Page, and D. Moher, "PRISMA 2020 statement: Development and changes," *Value in Health*, vol. 23, p. S312, 2020.
- [23] M. K. Swartz, "PRISMA 2020: An update," *Journal of Pediatric Health Care*, vol. 35, no. 4, p. 351, 2021.
- [24] A. Turisia, S. Suhartono, and R. Hidayat, "Pengaruh manajemen kepala sekolah...", *Edukatif*, vol. 3, no. 4, pp. 1985–1996, 2021.
- [25] B. Aydın *et al.*, "How school leadership and innovation shape instructional pathways...", *Studies in Educational Evaluation*, vol. 87, p. 101521, 2025.
- [26] R. Rini, E. Ujang, and S. Sowiyah, "School principals' leadership skills...", in *Proc. ICOPE*, pp. 557–571, 2023.
- [27] N. F. Anjani and F. Dafit, "Peran manajerial kepala sekolah...", *Jurnal Mimbar PGSD*, vol. 9, no. 3, pp. 481–488, 2021.
- [28] R. Rismayani, M. Muhaini, and S. Sabaruddin, "Peran manajemen kepala sekolah...", *Edu Cendekia*, vol. 2, no. 1, 2022.
- [29] M. Hulkin *et al.*, "Strategi kepemimpinan kepala sekolah...", *Ideguru*, vol. 9, no. 3, pp. 1313–1319, 2024.
- [30] B. Badrudin, M. Ummah, and I. Ropik, "The leadership role...", in *Proc. Int. Conf. Education*, pp. 884–889, 2024.
- [31] N. A. Hikmah *et al.*, "Analisis kepemimpinan kepala sekolah...", *Pendas*, vol. 10, no. 2, pp. 407–422, 2025.
- [32] M. Rasyid *et al.*, "Analisis kebijakan kepala sekolah...", *Al-Madrasah*, vol. 8, no. 2, pp. 603–610, 2024.
- [33] R. Dania and D. E. Andriani, "Instructional leadership practices...", *KnE Social Sciences*, vol. 6, no. 2, pp. 364–380, 2021.
- [34] H. Fitria and A. Marta, "The role of principal leadership...", in *Proc. INCoEPP*, pp. 826–829, 2021.
- [35] C. Sunaengsih *et al.*, "Principal leadership in effective school management," *Mimbar Sekolah Dasar*, vol. 6, no. 1, pp. 79–91, 2019.
- [36] S. Shopiana, "Manajemen kepala sekolah...", *Jurnal Pendidikan Indonesia*, vol. 5, no. 2, 2025.
- [37] R. Rini, E. Ujang, and S. Sowiyah, "School principals' leadership skills...", in *Proc. ICOPE*, pp. 557–571, 2023.
- [38] Y. C. Cheng, *School Effectiveness and School-Based Management*. Routledge, 2022.
- [39] S. Timotheou *et al.*, "Impacts of digital technologies on education...", *Education and Information Technologies*, vol. 28, no. 6, pp. 6695–6726, 2023.
- [40] G. Sang, M. Valcke, J. Van Braak, J. Tondeur, and C. Zhu, "Predicting ICT integration into classroom teaching in Chinese primary schools: Exploring the complex interplay of teacher-related variables," *Journal of Computer Assisted Learning*, vol. 27, no. 2, pp. 160–172, 2011.
- [41] P. Hallinger, "Science mapping the knowledge base...", *Educational Management Administration & Leadership*, vol. 48, no. 2, pp. 209–230, 2020.
- [42] V. M. Robinson, C. A. Lloyd, and K. J. Rowe, "The impact of leadership on student outcomes: An analysis of the differential effects of leadership types," *Educational Administration Quarterly*, vol. 44, no. 5, pp. 635–674, 2008.
- [43] OECD, *Education Policy Outlook 2021*. Paris: OECD Publishing, 2021.
- [44] N. S. W. Bo, "OECD digital education outlook 2023: Towards an effective education ecosystem," *Hungarian Educational Research Journal*, vol. 15, no. 2, pp. 284–289, 2025.
- [45] P. Kwan, "Is transformational leadership theory passé?," *Educational Administration Quarterly*, vol. 56, no. 2, pp. 321–349, 2020.
- [46] M. Nadeem, "Distributed leadership in educational contexts," *Social Sciences & Humanities Open*, vol. 9, p. 100835, 2024.
- [47] K. Leithwood, J. Sun, and R. Schumacker, "How school leadership influences student learning," *Educational Administration Quarterly*, vol. 56, no. 4, pp. 570–599, 2020.
- [48] A. Akhmad, "Digital leadership practices in educational management: A narrative literature review on trends and challenges," *International Journal of Learning, Teaching and Educational Research*, vol. 24, no. 8, pp. 112–135, 2025.
- [49] A. Benavot, "Global education monitoring report," in *International Encyclopedia of Education*, 4th ed., 2022.

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[50] M. Fullan, "Learning and the pandemic: What's next?," *Prospects*, vol. 49, pp. 25–28, 2020.

[51] A. Harris and M. Jones, "COVID-19—school leadership in disruptive times," *School Leadership & Management*, vol. 40, no. 4, pp. 243–247, 2020.