

Governance Strategies for Meeting School Principal Needs in Indonesia's Education Transformation

Kasmir Kasmir^{1*}, Arismunandar Arismunandar², and Aswi Aswi³

¹²³Educational Administration, Universitas Negeri Makassar, Makassar, Indonesia

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ABSTRACT

Indonesia's national education transformation depends on stable and professional school leadership, yet the appointment system continues to face large vacancies, reliance on acting principals, and uneven regional distribution. This study analyzes governance strategies for meeting school principal needs and examines the gap between the merit-based policy framework and implementation. A qualitative educational policy analysis was conducted through document review of national regulations, 2024-2025 education reports, official principal-need statistics, and 27 Scopus-indexed journal articles. The findings show a national need for 50,971 principals, comprising 10,899 impending retirements, 26,909 schools led by acting principals, and 13,163 schools without a principal. The problem reflects weak succession planning, candidate pipelines marked by inequitable access to preparation across regions, limited data integration, and context-insensitive distribution. The study proposes six mutually reinforcing strategies-fast-track appointment, cross-school redistribution, a ready-to-serve pipeline, conversion of acting principals, integrated digital governance, and affirmative support for priority regions—each mapped to implementing actors, classified by legal feasibility, and paired with post-appointment evaluation indicators. Its contribution lies in translating principal supply, selection, preparation, distribution, and digital governance into a legally grounded, actor-specific, and evaluable governance sequence rather than a purely conceptual framework, offering practical guidance for central and local governments.



Corresponding Author: kasmir@student.unm.ac.id

INTRODUCTION

Indonesia's education transformation requires school governance that is adaptive, professional, and oriented toward learning quality. School principals are central to this agenda because they connect national policy with classroom practice, teacher development, organizational culture, and resource allocation. Research syntheses consistently show that leadership contributes to student, teacher, and school outcomes, although much of its influence is indirect and mediated through organizational conditions (Hitt & Tucker, 2016; Leithwood et al., 2020; Liebowitz & Porter, 2019; Wu & Shen, 2022).

The policy significance of principalship extends beyond routine administration. Effective principals combine instructional and transformational practices, develop teachers, strengthen collaboration, and create conditions that support better instruction (Bellibaş et al., 2021; Day et al., 2016; Liu et al., 2021). Longitudinal evidence also indicates that improvement in principal leadership is associated with improvement in school performance from teachers' perspectives (Shen et al., 2021). Consequently, prolonged vacancies or unstable acting appointments can weaken both organizational continuity and instructional improvement.

Indonesia nevertheless faces a substantial leadership-supply problem. National statistics for 2025 identify 40,072 vacant principal positions and a total need for 50,971 principals, including impending retirements, schools led by acting principals, and schools without a principal (Ministry of Primary and Secondary Education of the Republic of Indonesia, 2025). The burden is unevenly distributed across provinces and is compounded in disadvantaged, frontier, and remote areas by geography, limited candidate pools, and weaker professional support systems.

Ministerial Regulation of Primary and Secondary Education Number 7 of 2025 directs principal assignment through merit-based procedures (Peraturan Menteri Pendidikan Dasar dan Menengah Republik Indonesia Nomor 7 Tahun 2025 tentang Penugasan Guru sebagai Kepala Sekolah, 2025). The regulation strengthens the formal basis for professional selection, but regulation alone does not create a functioning supply system. Merit-based appointment requires reliable demand forecasts, transparent candidate screening, sustained preparation, performance validation, and context-sensitive placement. Comparative research shows that leadership policy is enacted through local organizational and governance conditions rather than implemented mechanically (Gu et al., 2018; Mincu, 2024).

Existing studies have examined principal leadership, preparation, professional development, and leadership pipelines, but these areas are generally addressed separately (Daniëls et al., 2019; Gümüş et al., 2018; Ni et al., 2019; Perrone, 2022). More specifically, limited research has examined how Indonesia's substantial principal demand in 2025 particularly the high reliance on acting principals can be addressed through a governance framework that connects demand forecasting, merit-based selection, candidate preparation, principal conversion, regional distribution, and digital coordination. This study addresses this contextual and policy gap by examining these dimensions within Indonesia's current regulatory and institutional setting.

This study therefore analyzes governance strategies for meeting school principal needs in support of Indonesia's education transformation. It addresses three questions: (1) What is the scale and regional pattern of principal needs in Indonesia in 2025? (2) What gaps exist between merit-based assignment policy and its implementation? and (3) What phased governance strategies can reduce immediate vacancies while strengthening long-term leadership capacity?

LITERATURE REVIEW

Merit-Based Governance and Principal Supply

A merit-based principal system should connect objective eligibility criteria with competencies, integrity, demonstrated performance, and organizational needs. Yet selection is only one stage of the supply chain. Pipeline research also highlights an equity dimension: leakage at different stages can disproportionately reduce access to leadership opportunities for underrepresented groups (Fuller & Young, 2022; Perrone, 2022).

Diversifying recruitment, preparation, and placement is therefore important not only for increasing the number of candidates but also for ensuring that leadership opportunities are accessible across gender, geographic, and resource contexts (Clement et al., 2022; Reyes-Guerra et al., 2022). In Indonesia, this perspective is relevant because candidate availability and access to leadership preparation may differ across regions and school contexts. A merit-based system may therefore produce unequal outcomes if candidates from better-resourced schools have greater access to professional development, information, or preparation opportunities. Equity should consequently be considered alongside merit when designing a sustainable principal pipeline.

Policy implementation also depends on context. Principals interpret and mediate external policy through school structures, professional cultures, and available authority (Gu et al., 2018). Cross-national evidence shows that principals allocate time differently depending on national, organizational, and individual conditions (Gümüş et al., 2024). Thus, a formally uniform merit system may generate unequal results when local candidate pools, administrative capacity, geographic accessibility, and incentives differ substantially (Mincu, 2024).

In Indonesia, the Guru Penggerak Program has also been used as a pathway for preparing teachers for school principal positions. Previous implementation in several local governments shows that graduates of the program can form a pool of prospective principals, although appointment still depends on local verification and administrative coordination. This experience indicates that Indonesia has an existing policy foundation for developing a principal leadership pipeline, while also demonstrating that candidate preparation alone does not guarantee timely appointment.

Principal Pipeline and Leadership Development

A sustainable principal pipeline requires more than a short certification course. Preparation quality is associated with leadership learning outcomes, while competency assessment helps identify whether aspiring principals are ready for complex instructional and organizational responsibilities (Darwis et al., 2025; Ni et al., 2019). Reviews of leadership development emphasize coherent learning objectives, practice-based experiences, feedback, and alignment between preparation and workplace demands (Daniëls et al., 2019).

Professional development remains necessary after appointment. Principal development can strengthen leadership practices through increased self-efficacy, but effects depend on program quality, duration, follow-up, and opportunities to apply learning (Gümüş & Bellibaş, 2020; Meyer & Richter, 2025). Evidence from induction initiatives suggests that structured professional development can improve selected schooling outcomes, yet it should be combined with mentoring and organizational support rather than treated as a one-off administrative requirement (Steinberg & Yang, 2022).

Leadership Quality, Context, and Evidence-Based Governance

The urgency of filling vacancies cannot justify ignoring leadership quality. Transformational leadership emphasizes vision, motivation, organizational change, and the development of people (Bass & Avolio, 1994). Successful principals combine transformational and instructional strategies across different stages of school improvement (Day et al., 2016). Instructional and distributed leadership are associated with instructional quality, teacher self-efficacy, collaboration, and job satisfaction (Bellibaş et al., 2021; Liu et al., 2021). Leadership effectiveness also depends on how principals organize instruction

and manage relationships within their specific school context (Skaalvik, 2020; Zheng et al., 2017).

The knowledge base in educational administration has expanded rapidly but remains geographically and conceptually uneven (Hallinger & Kovačević, 2019). Indonesian evidence likewise shows that principals' capacity to implement policy depends on coordination, local resources, and stakeholder engagement (Sasaki et al., 2024). Adaptive leadership becomes especially important during disruption and institutional change (Harris & Jones, 2020). Based on this literature, the present analysis integrates five dimensions: demand forecasting, merit-based selection, candidate preparation, equitable distribution and retention, and interoperable data governance.

METHODS

Research Design

This study employed a qualitative educational policy analysis using document review and thematic interpretation. The design was selected because the research focused on the relationship between policy rules, national personnel data, leadership scholarship, and implementation problems rather than on measuring individual attitudes or testing causal effects.

Data Sources and Research Scope

The document corpus consisted of Ministerial Regulation Number 7 of 2025, the Indonesia Education Report 2024 (Kementerian Pendidikan, 2024), Education at a Glance 2023 (Organisation for Economic Co-operation and Development, 2023), official 2025 statistics on principal needs, policy materials on principal assignment, and 27 peer-reviewed journal articles published from 2016 to 2025 in Scopus-indexed outlets. The journal articles were purposively selected for direct relevance to principal effects, leadership preparation, professional development, pipeline design, policy enactment, governance, and contextual leadership. The empirical scope was the governance of public-school principal fulfillment in Indonesia, using data available through May 2025.

Madrasahs are outside the scope of this analysis. Although both public schools and madrasahs fall under Indonesia's education system, madrasah principal appointment operates under a separate institutional governance structure administered by the Ministry of Religious Affairs, with distinct personnel management arrangements, eligibility criteria, and appointment procedures from those established under Permendikdasmen No. 7 of 2025 for public schools under the Ministry of Primary and Secondary Education. Because the demand data, regulatory framework, and personnel authority examined in this study pertain specifically to public-school principal governance, extending the analysis to madrasahs would require a separate regulatory and institutional review beyond the current dataset.

Document Selection and Data Collection

Documents were included when they provided authoritative regulatory provisions, national or provincial demand data, or empirical and conceptual evidence directly related to the analytical themes. Materials lacking identifiable authorship, publication details, or relevance to principal governance were excluded. Key information was recorded in a document matrix covering principal demand, eligibility and selection, preparation, appointment status, geographic distribution, data systems, implementation barriers, and recommended interventions.

Data Analysis

Analysis proceeded in four stages. First, numerical and policy information was extracted and checked across the available official materials. Second, the documents were coded into demand, supply, selection, preparation, distribution, retention, and digital-governance themes. Third, gaps between formal policy and implementation requirements were identified. Fourth, proposed strategies were assessed according to urgency, feasibility, quality safeguards, and time horizon. Source triangulation and an audit trail of document categories were used to improve interpretive consistency. Because the study used public documents and did not involve human participants, research ethics approval was not required.

FINDINGS AND DISCUSSION

Findings

National Condition of School Principal Fulfillment

The 2025 School Leadership Program data reported by the Ministry of Primary and Secondary Education (Kemendikdasmen) recorded 184,954 public schools nationally, of which 144,882 had active principals and 40,072 had no definitive principal. The latter figure comprised 26,909 schools led by acting principals (Plt.) and 13,163 schools without a principal. In addition, 10,899 principals were projected to retire in 2025, resulting in a total estimated requirement of 50,971 principals. This situation indicates a substantial school-leadership supply and personnel-planning challenge rather than isolated delays in appointment. The large number of acting principals is particularly significant because prolonged acting arrangements may affect the continuity of school leadership and the exercise of responsibilities associated with definitive appointment.

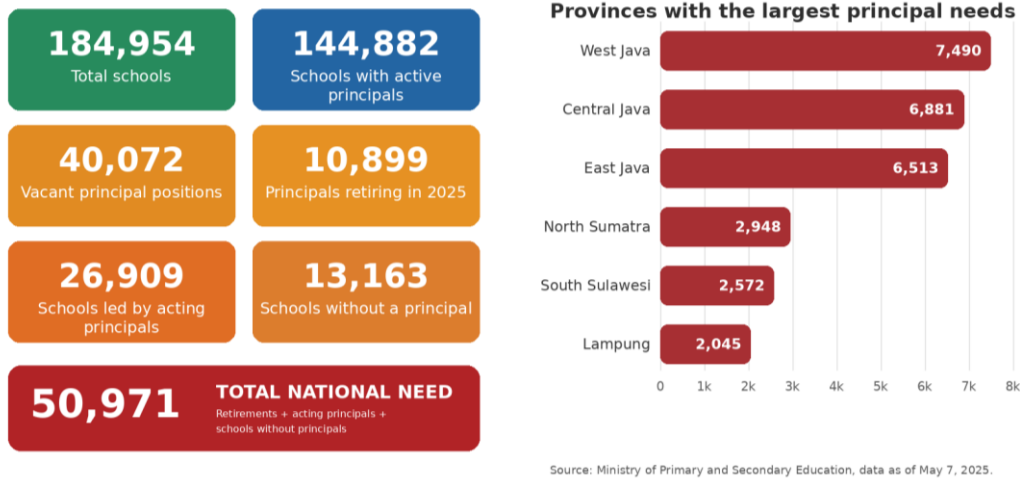


Figure 1. Public-School Principal Needs in Indonesia in 2025

Source: Ministry of Primary and Secondary Education (2025), data as of May 7, 2025; translated and redrawn by the authors.

Provincial demand was concentrated in populous regions. West Java recorded the largest need at 7,490 principals, followed by Central Java at 6,881 and East Java at 6,513. North Sumatra, South Sulawesi, and Lampung also reported substantial shortages. These figures indicate that high absolute demand is strongly related to the size of the school system and retirement volume, so large provinces require high-capacity appointment processes capable of handling candidates in batches without weakening merit safeguards.

Eastern Indonesian provinces reported smaller absolute numbers, but the lower totals should not be mistaken for lower policy difficulty. Candidate scarcity, distance,

transportation constraints, limited access to development programs, and weaker retention incentives can make each vacancy harder to fill. Aggregate statistics also do not reveal whether eligible candidates are located near the schools that need them, which limits the usefulness of national totals without district-level mapping.

Table 1. Condition of Public-School Leadership in Indonesia in 2025

Condition	Main finding
Principal demand	High across many provinces; total national need of 50,971
Acting principals	26,909 schools were led by acting principals
Principal distribution	Uneven across provinces and difficult-to-staff regions
Candidate development	Not yet continuous or linked consistently to forecasts
Merit-system implementation	Formal direction exists, but local implementation is uneven
Use of education data	Staffing, school, and candidate data are not fully integrated

Regulatory Framework for Merit-Based Principal Assignment under Permendikdasmen No. 7 of 2025

Permendikdasmen No. 7 of 2025 establishes a merit-based framework for principal assignment through needs mapping, candidate selection, training, and appointment. Article 4 requires local education offices to map projected principal needs and candidate availability, while Article 7 sets eligibility requirements based on qualifications, certification, performance, experience, integrity, and other criteria.

The implementation involves shared responsibilities between the Ministry, local education offices, and the Personnel Management Officer (PPK). This framework shows that the effectiveness of merit-based assignment depends not only on formal eligibility standards but also on the availability of qualified candidates and the capacity of local governments to connect needs mapping, candidate preparation, and appointment.

Permendikdasmen No. 7 of 2025 establishes the eligibility requirements for principal assignment, including the required status, qualifications, experience, performance, and preparation of candidates. The regulation provides the legal framework for appointment but does not establish a separate non-regular appointment cycle. Therefore, the proposed fast-track cycle should be understood as an acceleration of administrative processing within the existing appointment mechanism, rather than as a new appointment schedule.

Gap between Regulation and Implementation

Three implementation gaps emerged, each linked to a specific regulatory basis. First, candidate development is not yet organized as a continuous pipeline linked to projected retirement and vacancy data. Article 4 obligates local education offices to map projected principal needs and candidate availability, but the regulation does not mandate that this mapping trigger continuous, pre-vacancy candidate preparation; sustaining a standing candidate pool therefore falls in an area not yet addressed by regulation and would require a supporting implementation guideline. Second, education, staffing, and candidate-readiness data are not fully interoperable, which slows verification and appointment. While Article 4's mapping function presupposes reliable underlying data, Permendikdasmen No. 7 of 2025 does not specify a data-interoperability mechanism connecting school, staffing, and candidate information systems; this technical integration likewise remains outside the current regulatory text and would require a separate data-governance instrument. Third, a uniform appointment mechanism does not adequately address regional differences in candidate availability, geographic hardship, and retention. Article 7 establishes nationally uniform eligibility criteria covering qualifications, certification, performance, experience, and

integrity without differentiated provisions for candidate scarcity or hardship conditions in disadvantaged and remote regions; addressing this gap would accordingly require supplementary regulation rather than reinterpretation of Article 7 itself.

Governance Strategies for Principal Fulfillment

The analysis produced six mutually reinforcing strategies. The first four address appointment speed and candidate supply, while the final two provide the data infrastructure and regional support needed to sustain the system. None should be implemented in isolation: rapid appointment without performance safeguards risks poor selection, while rigorous preparation without vacancy forecasting may produce candidates in the wrong locations or at the wrong time.

The appointment authority should also be distinguished by school level and applicable personnel arrangements. For schools under provincial authority, including senior secondary schools, the relevant provincial authority exercises the appointment function through the designated Personnel Management Officer (PPK), while district/city governments exercise the corresponding function for schools under their authority, particularly primary and junior secondary schools. The Ministry establishes national standards and provides policy and system coordination, but does not replace the appointment authority of the relevant PPK.

Affirmative measures for priority regions may require additional funding where they involve housing, mobility assistance, mentoring, or other material support. The funding responsibility should follow the relevant governmental authority and budget framework: national support may be provided through central programs, while local governments may allocate resources within their respective budgets and legal mandates. The study therefore treats such measures as requiring budgetary planning rather than assuming a uniform national funding mechanism.

Table 2. Governance Strategies for Meeting School Principal Needs

No.	Strategy	Key implementation	Implementing actors	Fiscal implication	Expected effect and indicative horizon
1	Fast-track merit-based appointment	Use non-regular appointment cycles for fully verified candidates; process candidates in district or provincial batches.	Ministry, local education offices, and PPK	Minimal; primarily administrative processing costs within existing budgets.	Faster definitive appointments without removing safeguards; 3-6 months.
2	Redistribution and cross-school assignment	Map urgent vacancies and use temporary cross-school assignments only where workload and authority are manageable.	Local education offices and PPK	Minimal; limited to incidental transport and coordination costs.	Closes critical gaps temporarily; 0-6 months.
3	Ready-to-serve principal pipeline	Provide competency-based blended preparation, practice, coaching, assessment, certification, and	Ministry, local education offices, and training providers	Moderate; requires training, coaching, and certification budget from the Ministry	Expands the qualified candidate pool; 6-12 months and continuous.

		placement matching.		and training providers.	
4	Systematic conversion of acting principals	Audit performance and integrity; appoint qualified acting principals or require targeted development for identified gaps.	Local education offices and PPK	Minimal; limited to performance audit and assessment costs.	Uses experienced candidates while protecting quality; 0-3 months.
5	Integrated digital appointment governance	Connect school vacancies, retirement, staffing, candidate eligibility, training, and appointment progress in one monitored system.	Ministry and local education offices	Moderate to high; requires system development, data integration, and maintenance budget.	Improves transparency and decision speed; 6-12 months.
6	Affirmative intervention for priority regions	Provide allowances, mobility or housing support where relevant, mentoring, professional networks, and career recognition.	Central/local governments and relevant agencies	High; requires housing, mobility, and incentive budget from central/local governments, subject to budgetary authorization.	Improves placement and retention in hard-to-staff areas; continuous.

The implementation of these strategies requires coordinated action across government levels. The Ministry is primarily responsible for national standards, information systems, selection, and leadership preparation, while provincial and district/city education offices undertake local needs mapping, candidate identification, and administrative verification. The PPK retains authority for the appointment of ASN teachers as school principals, while training providers support candidate preparation. As shown in the fiscal implication column of Table 2, the administrative-processing strategies (Strategies 1, 2, and 4) can generally be absorbed within existing budgets, whereas capacity-building and infrastructure strategies (Strategies 3 and 5) and affirmative measures (Strategy 6) require dedicated budgetary planning and, where applicable, supporting regulations and budgetary authorization consistent with the funding-responsibility discussion above. Where the regulation does not clearly allocate responsibility or funding for a proposed instrument, implementation should be preceded by an administrative guideline or further regulatory clarification.

The proposed strategies, including the timeframes listed in Table 2, should be understood as an indicative sequence rather than a binding timetable. The initial phase may prioritize the assessment and conversion of qualified acting principals and urgent vacancy management, followed by accelerated appointment of verified candidates. The development of the candidate pipeline and integrated digital monitoring can then be strengthened as medium-term measures, while regional support should operate continuously. The month ranges in Table 2 illustrate this indicative progression rather than

fixed deadlines; actual duration should be adjusted to candidate volume, verification capacity, administrative readiness, and regional conditions.

Based on the identified gaps, six governance strategies are proposed to strengthen the supply and equitable distribution of school principals. These strategies should, however, remain within the legal framework established by Permendikdasmen No. 7 of 2025. Fast-track merit-based appointment can be implemented by accelerating the existing appointment process for verified and eligible candidates, although technical guidelines are needed to regulate scheduling, verification, and coordination without bypassing merit requirements. The development of a ready-to-serve principal pipeline and integrated digital appointment governance is also consistent with the regulation's provisions on candidate preparation, selection, training, information systems, and quality assurance, and therefore primarily requires implementation guidelines and data coordination.

The systematic conversion of qualified acting principals may likewise be undertaken within the existing framework, provided that the relevant eligibility and appointment requirements are fulfilled, including the transitional provision applicable where trained prospective principals are unavailable. By contrast, temporary cross-school assignment requires greater legal caution because the regulation already establishes provisions concerning the transfer and periodization of principal assignments. If the proposed arrangement creates a new form of temporary or dual assignment, further regulatory clarification would be required. Finally, affirmative interventions for priority regions are generally feasible within existing governmental authority, although specific incentives, facilities, or financial support may require supporting regulations and budgetary authorization. Accordingly, the proposed strategies should be understood not as entirely new appointment mechanisms, but as governance measures that can largely operate within the existing regulatory framework while requiring appropriate implementation guidelines and, where necessary, further regulatory adjustment.

Discussion

The magnitude of principal demand points to a deeper weakness in succession planning. Pipeline studies describe recruitment and preparation as a flow in which candidates can be lost before enrollment, during training, at appointment, or after placement ([Fuller & Young, 2022](#); [Perrone, 2022](#)). This pipeline perspective also raises an equity concern: candidate leakage may not be evenly distributed across gender, geographic location, or school-resource conditions, and candidates from remote or less-resourced schools may face greater barriers to preparation, mobility, professional networks, and access to leadership development. Strengthening the pipeline should therefore increase candidate volume while also monitoring whether recruitment and preparation opportunities are equitably distributed across regions and school contexts. Province- and district-level forecasts that trigger recruitment before retirement occurs would help close this gap, and partnerships among government, training institutions, and school systems can widen and stabilize candidate supply ([Clement et al., 2022](#); [Reyes-Guerra et al., 2022](#)).

Converting acting principals into definitive principals offers the fastest route to filling vacancies, though treating acting experience alone as proof of competence would be poor policy. Conversion should instead require a documented performance review, evidence of instructional leadership, integrity screening, and completion of any competency gaps, drawing on explicit competency frameworks and validated readiness measures ([Darwis et al., 2025](#); [Ni et al., 2019](#)). Fast-track appointment carries a similar caveat: it can shorten administrative waiting time without eliminating quality controls. The Guru Penggerak Program offers a relevant Indonesian precedent for building a pool of prospective principals, though the ready-to-serve pipeline proposed here is broader, referring to a continuously

maintained pool of candidates who have fulfilled the applicable preparation and eligibility requirements and can be matched with projected vacancies.

Distribution poses a different challenge, one that reassigning names on a spreadsheet cannot resolve. Cross-school assignments may close an urgent vacancy, but they risk overloading principals and diluting their attention across both schools. Priority-region policies accordingly need meaningful allowances, housing or mobility support where relevant, mentoring, professional networks, and predictable career recognition, since leadership is shaped substantially by governance context and available organizational support (Gümüş et al., 2024; Mincu, 2024). Indonesian qualitative evidence reinforces this point, showing that implementation capacity depends on coordination and local stakeholder engagement (Sasaki et al., 2024).

Given the risks that fast-track appointment and cross-school assignment pose to leadership quality and administrative continuity, both strategies warrant explicit safeguards. Fast-track appointments should be monitored through post-appointment competency, performance, and integrity reviews, with the mechanism reconsidered if recurring failures indicate that acceleration compromises selection quality. Cross-school assignments should remain temporary and trigger a definitive vacancy-resolution process once the arrangement approaches the legally permissible assignment period or once workload and accountability can no longer be effectively maintained. These safeguards keep leadership quality and institutional effectiveness ahead of the drive to reduce vacancy counts.

Leadership quality matters more than appointment quantity. Research links principal behavior with teacher practice, organizational health, and student outcomes, though many of these estimates remain observational rather than strictly causal (Liebowitz & Porter, 2019; Wu & Shen, 2022). Effective principals draw on instructional, transformational, and relational work together, rather than a single leadership model (Day et al., 2016; Gümüş et al., 2018), and ongoing development and self-efficacy matter because principals who feel unable to perform instructional leadership are more vulnerable to exhaustion and intention to leave (Gümüş & Bellibaş, 2020; Skaalvik, 2020).

Digital integration, for its part, should connect school vacancies, retirement projections, candidate eligibility, training completion, appointment progress, and placement outcomes. This is an operational inference from the governance analysis rather than evidence that a dashboard alone will solve the shortage; its value depends on data accuracy, clearly assigned institutional responsibility, timely updating, and protection against opaque automated decisions. Used properly, integrated data can support transparent decisions and help governments evaluate whether appointments improve stability, not merely whether recorded vacancies fall. Leadership-development effects should also be monitored longitudinally (Meyer & Richter, 2025; Shen et al., 2021; Steinberg & Yang, 2022).

The effectiveness of the proposed framework can be assessed through several post-appointment indicators: the reduction in the number and proportion of schools led by acting principals, the proportion of eligible candidates successfully appointed, the time required to fill vacancies, the distribution of principals across underserved regions, and post-appointment competency and performance results. Together these indicators offer a basis for reviewing whether accelerated appointment reduces vacancies without compromising leadership quality.

CONCLUSION

Indonesia's principal shortage is both numerical and systemic. In 2025, the national need reached 50,971 principals, dominated by schools led by acting principals and schools without definitive leadership. The evidence indicates gaps in succession planning, candidate pipelines, data interoperability, regional distribution, and the translation of merit-based regulation into consistent local practice.

A phased governance model is recommended: audit and convert qualified acting principals, use carefully controlled fast-track appointments, redistribute leadership only as a temporary measure, build a ready-to-serve pipeline, integrate personnel and school data, and provide affirmative support for disadvantaged and remote regions. The theoretical contribution is the integration of principal supply, selection quality, preparation, distribution, and digital governance within one human-resource planning framework. Practically, the model gives central and local governments a sequence of actions rather than a loose list of policy slogans.

This study is limited by its reliance on document analysis and aggregate national data. It cannot determine the quality of individual acting principals, district-level administrative causes, candidate willingness to relocate, or the causal effect of the proposed strategies. Future studies should use district case studies, interviews with candidates and officials, geospatial vacancy-candidate mapping, and longitudinal evaluation of appointment and development outcomes before the framework is scaled nationally.

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AUTHOR CONTRIBUTIONS

Conceptualization, K. and A.; methodology, K., A., and As.; formal analysis, K.; investigation, K.; data curation, K.; writing-original draft preparation, K.; writing-review and editing, A. and As.; visualization, K.; supervision, A. and As.; project administration, K. All authors have read and agreed to the published version of the manuscript.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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