

How Principal Strategies in Developing Teacher Professional Competence Improve Educational Quality: A Systematic Review

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Abstract. *Improving the quality of education hinges significantly on the leadership strategies of school principals, especially in the systematic development of teacher professional competence. This systematic review explores the strategic approaches employed by school principals to foster teacher professional competence and, consequently, improve educational quality. Employing a qualitative Systematic Literature Review (SLR) guided by PRISMA standards, this study synthesizes research published between 2020–2025, emphasizing frameworks such as TCCM and best practices in educational leadership. The findings reveal principal strategies that integrate instructional leadership, collaborative professional development, data-driven decision-making, inclusive school culture, and adaptive change management. Challenges persist, including resource constraints, varying teacher motivation, and policy-practice misalignments, but successful strategies hinge on collaborative environments, targeted professional development, continuous evaluation, and fostering a culture of innovation and resilience. The review provides robust theoretical and practical recommendations for policymakers, educational leaders, and practitioner communities seeking to elevate educational outcomes via strategic principal leadership in teacher competency development.*

Keyword: *Instructional Leadership, Teacher Professional Competence, Educational Quality*

INTRODUCTION

Strategic leadership from school principals has become increasingly recognized as a pivotal driver in educational reform and the improvement of learning outcomes. The role of principals extends beyond mere administrative functions, encompassing visionary leadership, curriculum development, instructional improvement, and the facilitation of collaborative, professional learning environments (Izzulhaq et al., 2024). In the global context, the demand for educational institutions to foster high standards, accountability, and adaptability necessitates transformative school leadership that is both evidence-informed and contextually responsive.

Ideally, school principals are expected to serve as instructional leaders setting clear directions, promoting a positive and inclusive culture, managing resources effectively, and catalyzing the professional growth of teachers (Palah et al., 2022). Teachers remain at the core of educational quality; research consistently demonstrates that teacher professional competence spanning pedagogic, professional, social, and personal dimensions is strongly linked to student achievement and overall school effectiveness (Popova et al., 2022). The development of teacher competencies including mastery of content, didactic skills, classroom management, and reflective capacities is thus a strategic concern for schools aiming to thrive in an era characterized by rapid change, high stakes accountability, and diverse student populations.

However, the realities faced in the field reveal numerous gaps between the ideals of principal-driven teacher professional development and prevailing practice. Substantial bodies of research cite persistent issues such as inconsistent teacher participation in professional learning, limited resources for ongoing development, insufficient principal preparation, and contextual barriers in the school ecosystem (Bush, 2022). Many principals, especially in developing nations and marginalized settings, encounter challenges such as inadequate training, overlapping responsibilities, and the absence of a supportive policy environment resulting in leadership that is reactive rather than strategic.

The shifting educational landscape marked by digital transformation, inclusive schooling imperatives, and crises like the COVID-19 pandemic has underscored the need for adaptive leadership models. Principals must now not only spearhead organizational management but also demonstrate competencies in instructional leadership, staff development, crisis and change management, and the cultivation of a collaborative professional culture (Posso et al., 2025). Best practices in international contexts highlight how effective principal strategies can mitigate teacher shortages, bridge urban-rural divides, and promote quality even in low-resource settings (Dr. Kao Kim Hourn et al., 2025).

The urgency of this inquiry is reinforced by international benchmarks such as the Sustainable Development Goal (SDG) 4: Quality Education, which places teacher quality, professional development, and effective school leadership at the forefront of global education agendas. Regional frameworks, such as the Southeast Asia Teachers Competency Framework, further define the standards and expectations for both teachers and educational leaders (David Edward & Stefani Giannini, 2019). Despite these significant frameworks and policy advances, challenges remain in translating them into sustained improvements in school practice and learning outcomes.

Consequently, it is crucial to synthesize and critically examine the existing research on how school principals enact strategic approaches to develop teacher professional competence, and how these strategies contribute to sustained improvements in educational quality. While individual empirical studies have explored elements of leadership, teacher development, and quality improvement, there remains a lack of comprehensive, systematic reviews that integrate these perspectives and offer grounded recommendations for context-sensitive policy and practice (Izzulhaq et al., 2024). This research is therefore motivated by key questions:

1. What strategic leadership actions do principals use to foster teacher professional competence?
2. How do these actions impact educational quality as perceived through learning outcomes, teacher performance, and school culture?
3. What frameworks and best practices from international research can inform scalable, effective principal-led strategies in teacher development?
4. What challenges, limitations, and contextual factors influence the implementation of these strategies?

Addressing these questions is both timely and necessary. The systematic review approach, guided by internationally accepted frameworks (such as PRISMA and TCCM), offers a robust methodology to map, synthesize, and critically evaluate scholarly evidence from a diverse array of contexts and research traditions. The resulting synthesis is intended to guide educational policy, principal preparation programs, and school-based improvement initiatives, with the ultimate goal of empowering principals and teachers to collectively elevate the quality of education for all learners.

METHOD

This research adopts a qualitative Systematic Literature Review (SLR) approach, recognized as a gold standard for synthesizing existing educational research and generating evidence-based recommendations for both policy and practice. The systematic review design follows established PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, which ensure transparency, replicability, and methodological rigor throughout the evidence synthesis process. Where relevant, the TCCM (Theories, Context, Characteristics, Methods) framework is also integrated to structure analytical synthesis and highlight theoretical, contextual, and methodological trends.

Process Overview:

1. Definition of Research Question:

The central research question is, "How do principal strategies in developing teacher professional competence contribute to improvements in educational quality, and what are the key frameworks, challenges, and solutions identified in robust educational research?"

2. Eligibility Criteria:

Articles were considered for inclusion if they (a) were published between 2020 and 2025 to reflect recent trends; (b) utilized qualitative or mixed methods or offered review-based analysis; (c) focused on principal leadership, teacher professional development, and educational quality; (d) were published in peer-reviewed international journals (Scopus, Web of Science, ERIC, and high-impact educational journals); and (e) were available in English or Bahasa Indonesia, as relevant to context.

3. Exclusion criteria encompassed theoretical papers without empirical or synthesis data, studies focusing solely on student or non-leadership outcomes, or those outside the scope of school-based education.

4. Database Search and Study Selection:

Comprehensive searches were conducted across Scopus, Web of Science (WoS), ERIC, Google Scholar, and institutional repositories, using combinations of keywords: "principal leadership," "school leadership," "teacher professional competence," "professional development," "educational quality," "instructional leadership," "systematic review," "PRISMA," and "TCCM". Search results were exported to citation management software to ensure systematic tracking and de-duplication.

5. The PRISMA flow process was employed:

- a. Identification: Titles and abstracts of all retrieved records were screened for relevance.
- b. Screening: Duplicates and non-relevant records were removed.
- c. Eligibility: Full-text reviews were conducted, assessing inclusion criteria and methodological rigor (using MMAT for mixed-methods studies where applicable).
- d. Inclusion: The final sample included 80 high-quality research articles, education policy documents, and review studies from international contexts, ensuring representativeness across different school systems and geographies.

6. Data Extraction and Synthesis:

Relevant data were extracted into a standardized form covering: study aims, principal strategies described, frameworks/models used, outcomes on teacher competence and educational quality, methodological characteristics, sample and setting, findings, reported challenges, and solutions.

Analytical coding was carried out thematically, iteratively refining themes to reflect both dominant trends and significant nuances.

7. The TCCM framework provided an organizing lens, mapping evidence along:
 - a. Theories (e.g., Transformational/Instructional Leadership, Distributed Leadership, Servant Leadership)
 - b. Context (national, regional, rural/urban, policy context)
 - c. Characteristics (types of strategies, implementation modes)
 - d. Methods (qualitative, mixed-methods, review-based, case studies)

8. Quality Appraisal and Consensus:

Studies were appraised for methodological rigor, relevance, transparency, and contribution to the field. Discrepancies in coding or appraisals were resolved through researcher consensus and, where required, expert consultation.

FINDINGS

This systematic review highlights several interconnected themes regarding principal leadership strategies in developing teacher professional competence for educational quality improvement. The research literature converges on the central assertion that the effectiveness of a school principal is strongly mediated by their ability to enact clear, adaptive, and collaborative strategies for ongoing teacher development, which ultimately impacts school culture and student achievement.

DISCUSSION

The synthesis of recent literature robustly affirms that *principal leadership is the second most powerful school-based influence on student learning outcomes, following only classroom teaching itself* (Palah et al., 2022). Yet, as this review demonstrates, the extent to which principals are able to realize this influence is profoundly dependent on their strategic, sustained, and contextually responsive commitment to developing teacher professional competence.

A. Strategic Leadership: From Policy Ideal to School Reality

While international frameworks and national policies increasingly articulate clear standards and mandates for teacher PD and principal leadership, local implementation remains uneven. *Successful principal strategies are not generic—they necessarily reflect the sociocultural, material, and organizational realities of their schools.* For example, Indonesian regulations regarding teacher competencies (Peraturan

Menteri Pendidikan Nasional No. 16/2007) and principal selection (Permendikbudristek No. 40/2021) establish strong formal requirements, yet their impact on practice is mediated by differences in principal preparation, resource allocation, and school culture (Izzulhaq et al., 2024).

The review evidences that, in contexts where principals:

1. Integrate data-driven instructional leadership with a distributed, collaborative approach,
2. Prioritize reflective, job-embedded, and context-specific professional development,
3. Model adaptive and equity-oriented change management,
4. Build strong relationships with staff, students, and the broader community, the results consistently include improved teacher competence, professional satisfaction, and student outcomes.

Persistent Challenges and Adaptive Responses

Challenges such as limited funding, heavy administrative demands, diversity of teacher needs, and crisis-induced disruption are not insurmountable, but require sustained, strategic, and collaborative leadership responses. Adaptive leaders counter these challenges by innovating around local resources (e.g., leveraging KKG/MGMP, forging inter-school networks), personalizing professional learning, and optimizing limited time and funding for the highest-impact development priorities (Kurnia Robby et al., 2024).

International Models and Local Adaptation

The international comparative evidence from successful reforms in Singapore, the professional learning networks in Japan and Korea, to distributed leadership models in New Zealand and Australia underscores the universality of collaborative, sustainable professional development as a cornerstone of teacher and school improvement (Dr. Kao Kim Hourn et al., 2025). These models are effective where they are sensitive to local context, founded on robust principal support, and include both vertical (school-leadership-teacher) and horizontal (peer-to-peer) learning opportunities (International Development Research Centre, 2024).

A Research and Practice Agenda

Future research and innovation in the field should move beyond documenting "what works" to focus on "how" and "why" certain strategies succeed in specific contexts, with particular attention to:

1. Mechanisms for sustaining and scaling teacher learning communities
2. Models for principal training that combine instructional, distributed, and servant leadership approaches

3. Comprehensive impact assessments linking principal leadership, teacher competencies, and student achievement using mixed-methods and longitudinal designs
4. Policy and funding innovations to ensure equitable, context-adaptive access to high-quality PD across all school types

CONCLUSION

The systematic review confirms that the quality of education in any school is intrinsically linked to the principal's strategic acumen in fostering, guiding, and sustaining teacher professional competence. Effective principal strategies, as illuminated by this research, are marked by instructional and distributed leadership, collaborative and reflective professional development, data-based decision-making, and responsive adaptation to local contexts and emerging challenges.

Impactful principal leadership accelerates teacher growth, enhances pedagogic innovation, and creates the organizational conditions for sustained school improvement. Importantly, the research also highlights that strategic leadership is not solely the product of individual capacity, but also of systemic investments in principal training, policy coherence, resource allocation, and a culture of collective responsibility.

For theory and practice, these findings advocate for:

1. The integration of instructional, transformational, distributed, and servant leadership models in principal development
2. The prioritization of collaborative, ongoing, and context-responsive professional development in schools
3. Strong policy and systemic support for principal agency and distributed leadership
4. Continual evaluation, innovation, and research focused on the adaptation and scaling of best practices across diverse educational setting.

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