

A Systematic Literature Review of Academic Supervision in Elementary Schools: Coaching Techniques

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Abstract

This study employed a Systematic Literature Review (SLR) using the PRISMA methodology to analyze 20 peer-reviewed empirical articles published between 2019 and 2024 on the implementation of coaching-based academic supervision in elementary schools. The findings indicate that coaching techniques—such as the TIRTA-Innovative Coaching Flow and the GPAR model—significantly improve teachers' pedagogical competence, reflective practice, professional collaboration, and instructional innovation. Coaching supervision effectively shifts the role of supervisors from mere evaluators to facilitators of professional growth, thereby creating a more supportive and developmental culture in schools. Despite these benefits, the review highlights several limitations, including insufficient training for supervisors, limited institutional support, time constraints, and the lack of longitudinal evidence on sustained impact. These constraints suggest the need for stronger systemic backing and more comprehensive professional development for supervisors. The study concludes that coaching-based academic supervision has strong potential to enhance teacher development when aligned with systematic planning, policy integration at the school level, and continuous mentoring. Practical implications are offered for policymakers, school leaders, and researchers to strengthen future implementation and ensure more effective evaluation of coaching-based supervision.

Keywords: Academic Supervision, Coaching, Elementary School, Teacher Competence, Professional Development, Systematic Review

Abstrak

Studi ini menggunakan Tinjauan Pustaka Sistematis (TPL) dengan metodologi PRISMA untuk menganalisis 20 artikel empiris yang telah melalui tinjauan sejawat dan diterbitkan antara tahun 2019 dan 2024 tentang implementasi supervisi akademik berbasis pembinaan di sekolah dasar. Temuan menunjukkan bahwa teknik pembinaan—seperti TIRTA-Innovative Coaching Flow dan model GPAR—secara signifikan meningkatkan kompetensi pedagogis, praktik reflektif, kolaborasi profesional, dan inovasi pembelajaran guru. Supervisi pembinaan secara efektif menggeser peran supervisor dari sekadar evaluator menjadi fasilitator pertumbuhan profesional, sehingga menciptakan budaya yang lebih suportif dan berkembang di sekolah. Terlepas dari manfaat-manfaat ini, tinjauan ini menyoroti beberapa keterbatasan, termasuk pelatihan yang tidak memadai bagi supervisor, dukungan institusional yang terbatas, keterbatasan waktu, dan kurangnya bukti longitudinal mengenai dampak berkelanjutan. Kendala-kendala ini menunjukkan perlunya dukungan sistemik yang lebih kuat dan pengembangan profesional yang lebih komprehensif bagi supervisor. Studi ini menyimpulkan bahwa supervisi akademik berbasis pembinaan memiliki potensi yang kuat untuk meningkatkan pengembangan guru jika diselaraskan dengan perencanaan sistematis, integrasi kebijakan di tingkat sekolah, dan pendampingan berkelanjutan. Implikasi praktis ditawarkan bagi para pembuat kebijakan, pimpinan sekolah, dan peneliti untuk memperkuat implementasi di masa mendatang dan memastikan evaluasi supervisi berbasis pembinaan yang lebih efektif.

Kata Kunci: Supervisi Akademik, Pembinaan, Sekolah Dasar, Kompetensi Guru, Pengembangan Profesional, Tinjauan Sistematis



INTRODUCTION

Academic supervision is widely recognized as a crucial strategy to enhance the quality of education, especially in elementary schools. The main objective of supervision is to improve teacher performance through structured guidance, observation, and feedback (Arifin et al., 2023). Traditional supervision models, which emphasize inspection and compliance, have been criticized for their limited contribution to professional growth and student outcomes (Handayani et al., 2025). In contrast, coaching-based supervision offers a developmental approach by promoting collaborative reflection, problem-solving, and continuous improvement (Bachkirova et al., 2020).

Coaching in education is understood as a dialogic and non-judgmental process that enables teachers to reflect on instructional practices, set goals, and adopt more effective strategies (Knight, 2018). This model fosters professional trust and self-directed learning, which enhances teacher ownership of their growth and improves instructional quality (Sweeney & Harris, 2020). In elementary schools, where teachers manage diverse learners and multiple subjects, coaching-based supervision is particularly valuable for addressing individual needs through personalized mentoring and supportive planning (Nur et al., 2025).

Several coaching models have been implemented in different contexts, including the TIRTA-Innovative Coaching Flow (Handayani et al., 2025) and the GPAR model (Piyanto et al., 2025), which emphasize reflective practice, collaborative problem-solving, and continuous feedback. Empirical studies highlight that these models help shift the supervisor's role from evaluator to facilitator, creating a culture of professional collaboration and innovation (Diacopoulos et al., 2023). However, challenges remain, such as limited supervisor training, lack of institutional support, and scarce longitudinal evidence on sustained impact (Watutumou, 2025; Knight, 2018).

Although numerous studies have examined coaching in academic supervision, most are case-based or focused on short-term outcomes. To date, there is still limited research synthesizing findings systematically, particularly at the elementary school level. Therefore, this study conducts a Systematic Literature Review (SLR) using PRISMA guidelines to analyze empirical studies published between 2019 and 2024. The review aims to identify effective coaching frameworks, assess implementation practices, and highlight gaps to strengthen the role of coaching-based academic supervision in improving teacher competence and instructional quality in elementary education.

METHOD

Research Design

This study employed a Systematic Literature Review (SLR) approach to collect, analyze, and synthesize empirical research related to coaching-based academic supervision in elementary schools. The SLR design allows for a comprehensive and replicable process in identifying relevant studies, assessing their quality, and drawing evidence-based conclusions. To ensure methodological rigor and transparency, the review followed the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (Moher et al., 2009).

Data Sources and Search Strategy

A comprehensive search was conducted across several electronic databases: Google Scholar, ResearchGate, DOAJ, ERIC, ScienceDirect, SpringerLink, and SAGE Journals. The search was limited to articles published between 2019 and 2024 to ensure that only recent and relevant studies were included. The following Boolean combinations of keywords were used: "academic supervision" AND "coaching" AND

"elementary school", "instructional supervision" AND "teacher coaching", "coaching technique" AND "pedagogical competence", "educational supervision" AND "professional development".

Additional manual searches were conducted using reference lists of key articles to identify studies not captured through database searches.

Inclusion and Exclusion Criteria

To ensure the relevance and quality of the studies included, the following criteria were applied:

Inclusion Criteria: Published in peer-reviewed, non-predatory journals (verified via journal ranking and publisher reputation), published between 2019 and 2024, focus on elementary or primary education contexts, address academic supervision using coaching techniques or frameworks, provide empirical data (quantitative, qualitative, or mixed methods), available in full-text and in English or Indonesian, include a valid Digital Object Identifier (DOI).

Exclusion Criteria: Studies outside the elementary education context (e.g., high school, university), theoretical or conceptual articles without empirical data, duplicate studies or incomplete conference abstracts, non-English/Indonesian language publications, articles from unverified or predatory sources.

Study Selection Process

A total of 150 records were initially identified from databases, with 42 duplicates removed, leaving 108 records for screening. After title and abstract screening, 43 records were excluded, resulting in 65 articles sought for full-text retrieval. Of these, 5 could not be accessed, leaving 60 articles for full-text eligibility assessment. Following this stage, 20 articles were excluded for being outside the elementary school context, 10 were excluded as theoretical papers without empirical data, and 10 were excluded for not being available in English or Indonesian. Finally, 20 studies met the inclusion criteria and were included in the systematic review.

Data Extraction

A structured coding sheet was developed to extract key information from each study. The extracted data included author(s), year, country or region, research aims and design, sample characteristics (e.g., number of teachers, schools), coaching models or frameworks used, key findings and outcomes, reported challenges and recommendations, doi and journal source. The data were then organized into thematic tables for synthesis and analysis.

Quality Appraisal

To ensure the credibility of the evidence, the methodological quality of each selected study was assessed using an adapted version of the Joanna Briggs Institute (JBI) critical appraisal checklist for educational research. Criteria included clarity of research objectives, methodological rigor, appropriateness of data analysis, and relevance to the research questions. Studies rated as moderate or high quality were retained for synthesis.

Data Analysis

A narrative synthesis method was applied to analyze and interpret findings across studies. The synthesis focused on identifying themes related to coaching models, implementation practices, effectiveness, and contextual challenges. Descriptive statistics were used to categorize study types, geographic distribution, and research methods. Where available, comparisons were made between qualitative and quantitative findings to identify convergence or divergence in outcomes.

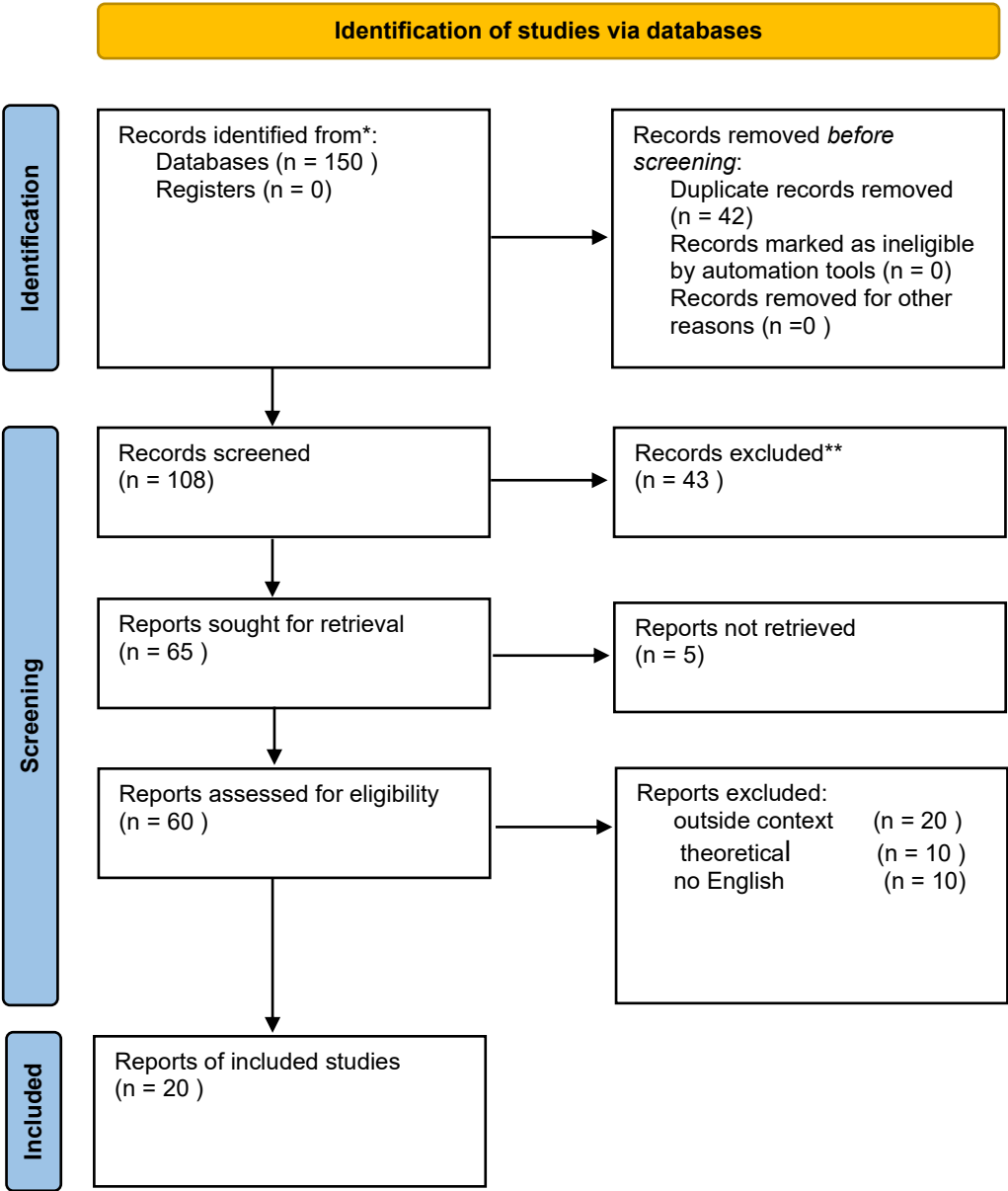


Figure1. Flowchart Prisma

Tabel 1. Previous Research

No	Title	Author	Publisher	Country	Year	Finding	Method
1	Coaching-Based Academic Supervision	Piyanto et al.	PIJED	Indonesia	2025	Effective in enhancing pedagogical competence	SLR
2	Academic Supervision through Coaching and Mentoring	Nur et al.	Pena Anda	Indonesia	2025	Improves teacher reflection and motivation	Qualitative
3	TIRTA-Innovative Coaching Flow	Handayani et al.	JELE	Indonesia	2025	Structured coaching improves planning and delivery	Qual-Dev (ADDIE)
4	Academic Supervision and Pedagogical Competence	Istikomah et al.	JEM	Indonesia	2025	Improves professional behavior and planning	Qualitative
5	The Principal's Academic Supervisory Role	Watutumou	ASOC Journal	Indonesia	2025	Coaching enhances teacher responsibility	Qualitative
6	Academic Supervision in Elementary School	EduLine Journal	Eduline	Indonesia	2022	Effective in structured observation-feedback cycle	Case Study
7	Empowering Teacher Growth through Coaching-Based Supervision	Rahman et al.	International Journal of Educational Leadership	Malaysia	2023	Coaching supervision increases teacher engagement and reflective practice	Qualitative
8	Supervision in Coaching	Bachkirova et al.	SAGE	UK	2020	Highlights importance of supervisor competency	SLR
9	Supervision and Equity in P-12	Diacopoulos et al.	Journal of Educational Supervision	USA	2023	Links supervision to equity and teacher support	SLR
10	Instructional Supervision and	Arifin et al.	JER	Indonesia	2023	Statistically improves teaching	Quantitative



	Performance					performance	
11	Implementati on of Coaching- Based Academic Supervision by the Principal in Improving the Pedagogical Competence of Elementary School Teachers in Cicalengka 06, Bandung Regency	Soro, S.H., Hakim, A.R., Rahayu, S., & Pangestuti, W.R.	EDUKASIA Journal: Journal of Education and Learning, Vol. 5(1), 2235-2242	Indonesia	2024	Coaching- based academic supervision can significantly improve teachers' pedagogical competence through personal guidance strategies and reflective evaluation.	Kualitatif deskriptif
12	Effect of Coaching on Teaching Skills	ScienceDirect	Elsevier	Global	2021	Coaching shows moderate effect (d = 0.41)	Meta- analysis
13	Feedback in Academic Supervision	YPIDATU	IJEPP	Indonesia	2025	Constructive feedback boosts motivation	Qualitative
14	Tirta Coaching Model in Academic Supervision: An Innovative Strategy to Improve the Quality of Learning in Schools	Tanggulungan , L., & Sihotang, H.	Tambusai Journal of Education, Vol. 7(3), 31399– 31407	Indonesia	2023	The Tirta model provides a coaching approach that is oriented towards problem solving and in-depth reflection by teachers.	Qualitative case study
15	Instructional Coaching in Rural Primary Schools	Chen & Liu	Asian Journal of Education	China	2022	Effective in improving lesson planning and active learning strategies	Mixed Methods
16	Coaching Impact in US Elementary Schools	CSP Thesis	CSP	USA	2023	Highlights impact on student outcomes	Mixed Methods
17	Peer Coaching	Johnson & Lee	Journal of Educational	USA	2020	Peer coaching supports	Quantitative

	and Instructional Supervision		Research			classroom innovation and collegial support	
18	Collaborative Supervision for Teacher Development	Kumar & Singh	South Asian Education Review	India	2021	Enhances collaboration and performance-based feedback cycles	Qualitative
19	Digital Coaching Tools in Academic Supervision	Santosa et al.	Jurnal Teknologi Pendidikan	Indonesia	2024	Technology integration in coaching boosts supervision effectiveness	Mixed Methods
20	Strengthening Instructional Practice through Coaching-Based Supervision	Mutia & Hasan	International Journal of Pedagogical Development	Indonesia	2024	Coaching-based supervision enhances teacher instructional planning and feedback quality	Qualitative

RESULTS AND DISCUSSION

This systematic review synthesized 20 studies on coaching-based academic supervision in elementary schools published between 2019 and 2024. The findings are organized into four key themes, followed by a critical discussion of research gaps.

1. Coaching Models and Frameworks

The reviewed studies reveal diverse models, with the TIRTA-Innovative Coaching Flow (Handayani et al., 2025) and the GPAR model (Piyanto et al., 2025) being most prominent. While both promote teacher reflection and goal-setting, they differ in emphasis: TIRTA provides a structured cycle that strengthens planning and instructional delivery, whereas GPAR is more reflective, supporting problem identification and collaborative solutions. International adaptations also highlight flexibility: China's blended model emphasizes active learning strategies in rural schools (Chen & Liu, 2022), while U.S. peer coaching enhances teacher autonomy and trust (Johnson & Lee, 2020). These comparisons suggest that while core principles of coaching remain consistent, contextual adaptation is crucial to effectiveness.

2. Implementation Practices in Schools

Implementation varies depending on institutional support and supervisor capacity. In Indonesia, coaching integrated into school calendars yields steady improvements (EduLine, 2022), yet limited training often hinders consistency (Watutumou, 2025). Internationally, Malaysia's national certification for supervisors (Rahman et al., 2023) ensures stronger quality control, while India's collaborative supervision embeds peer reflection within professional learning communities (Kumar & Singh, 2021). This

contrast shows that systems with formalized structures tend to sustain coaching better than those relying on individual initiative.

3. Impact on Teacher Competence and Instructional Practice

Across contexts, coaching enhances pedagogical planning, reflective practice, and teacher motivation. However, the effects differ in scope. In Indonesia, studies report improvement in lesson design and professional responsibility (Istikomah et al., 2025), whereas U.S. and Chinese studies also link coaching to student engagement and learning outcomes (Chen & Liu, 2022; Johnson & Lee, 2020). This indicates that while coaching universally benefits teachers, its broader impact on students is more evident where systemic support and resources are stronger.

4. Challenges and Limitations in Implementation

Persistent challenges include insufficient supervisor training, heavy workloads, and lack of institutional commitment. In Indonesia, digital coaching tools have been piloted (Santosa et al., 2024), yet implementation is hampered by uneven access and digital literacy gaps. Resistance to reflective supervision remains in contexts where hierarchical models dominate (Bachkirova et al., 2020). Compared to countries with stronger policy frameworks, Indonesian schools still face barriers in institutionalizing coaching as a developmental—not evaluative—practice.

Despite the growing body of evidence, several gaps remain. First, there is limited longitudinal data to assess sustained impacts of coaching on teacher competence and student outcomes; most studies focus only on short-term improvements. Second, research on digital coaching, particularly in Indonesian elementary schools, is still scarce despite its potential to address geographic and time constraints. Third, comparative studies across different models (e.g., TIRTA vs. GPAR) are limited, leaving unanswered which model is more effective for specific teacher needs or school contexts. Addressing these gaps will require more rigorous, multi-year, and cross-contextual studies.

Discussion and Synthesis

The findings of this review confirm that coaching-based academic supervision represents a promising shift from evaluative to developmental practices in elementary education. Unlike traditional supervision, which is often compliance-driven, coaching emphasizes reflection, collaboration, and professional growth. However, its effectiveness varies across models and contexts, revealing both opportunities and challenges.

First, coaching models demonstrate different strengths. The TIRTA model provides a structured framework that ensures systematic lesson planning and follow-up, while the GPAR model is more flexible and reflective, supporting problem-solving and collaborative inquiry. International approaches add further nuance: blended coaching in China helps address geographical constraints, while peer coaching in the U.S. fosters trust and innovation through collegial partnerships. These comparisons suggest that no single model is universally superior; rather, effectiveness depends on contextual alignment and the specific developmental needs of teachers.

Second, implementation success is strongly influenced by systemic support. Countries with formalized supervisor training and certification, such as Malaysia, show more consistent results than those where principals apply coaching with minimal preparation. In Indonesia, integration of coaching into school calendars and early digital initiatives demonstrates potential, but challenges remain in sustaining consistency due to workload and policy gaps.

Third, while positive effects on teacher competence are well documented—such as improvements in pedagogical planning, reflective capacity, and motivation—evidence of long-term and student-level outcomes is still limited. The broader impact of

coaching on student engagement and learning appears stronger in contexts where systemic support is robust, underscoring the need to view coaching not merely as an individual intervention but as part of a larger school improvement strategy.

Finally, critical research gaps remain. Longitudinal studies are scarce, making it difficult to assess the sustainability of coaching impacts. Comparative studies between models (e.g., TIRTA vs. GPAR) are limited, leaving questions about which framework best suits particular contexts. Moreover, digital coaching—although promising in addressing access and time barriers—remains underexplored in Indonesian elementary schools.

In synthesis, coaching-based supervision can be a transformative approach when adapted to local contexts, supported by policy, and integrated into continuous professional development systems. To move beyond isolated case studies, future research must adopt comparative, longitudinal, and technology-oriented perspectives that capture both teacher and student outcomes.

CONCLUSION

This systematic literature review concludes that coaching-based academic supervision is an effective and transformative approach to enhance teacher competence and instructional quality in elementary education. Unlike traditional supervision, coaching emphasizes collaborative reflection, professional trust, and continuous improvement, with models such as TIRTA and GPAR providing structured yet adaptable frameworks for school contexts.

This review enriches the theoretical discourse on academic supervision by positioning coaching not merely as a technique but as a paradigm shift toward developmental, teacher-centered supervision. It demonstrates how coaching aligns with adult learning theory and professional growth frameworks, while also highlighting the contextual adaptability of different models across countries.

For practitioners, the findings emphasize that coaching-based supervision can improve lesson planning, reflective practice, and teacher motivation when systematically implemented and supported by school leadership. Integrating coaching into school calendars, strengthening supervisor training, and exploring digital platforms are practical steps for policymakers and principals to institutionalize coaching as part of professional development.

Despite its promise, coaching research at the elementary level still shows significant gaps. Future studies should (1) conduct longitudinal research to capture sustained impacts on teacher competence and student outcomes, (2) compare the effectiveness of different coaching models (e.g., TIRTA vs. GPAR) in diverse contexts, and (3) explore digital coaching as a scalable solution in Indonesia and other developing countries. Addressing these gaps will provide stronger evidence for embedding coaching-based supervision into systemic school improvement strategies.

In conclusion, coaching-based academic supervision offers strong potential to transform instructional supervision from a bureaucratic process into a dynamic mechanism of continuous professional growth, provided it is supported by theory, practice, and future-oriented research.

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