Journal of Educational Sciences
Journal homepage: https://jes.ejournal.unri.ac.id/index.php/JES
P-ISSN 2581-1657
E-ISSN 2581-2203

Optimalization of the Role of the School Principal as a Supervisor for Enhancing Teachers' Pedagogical Competence: A Quantitative Study at State Elementary School 1 Pamotan Rembang Regency

Nurun Nikmah*, Titik Haryati, Sumarno
Manajemen Pendidikan, Universitas Persatuan Guru Republik Indonesia, Semarang, 50232, Indonesia

ARTICLE INFO

Article history:

Received: 24 July 2025
Revised: 10 Aug 2025
Accepted: 03 Sept 2025
Published online: 10 Sept 2025

Keywords:

School Principal,
Pedagogical Competence,
Quantitative Study,
Elementary School

* *Corresponding author:*

E-mail: nurunkls5@gmail.com

Article Doi:

https://doi.org/10.31258/jes.9.5.p.3521-3533

This is an open access article under the CC BY-SA license.

A B S T R A C T

Quality education in elementary schools is closely tied to teachers' pedagogical competence, which strongly influences student learning outcomes. In Indonesia, the improvement of this competence is mandated by Law No. 14/2005 on Teachers and Lecturers. As instructional leaders, school principals hold a strategic role in fostering teacher development through effective academic supervision. This study aims to examine the principal's role at state elementary school 1 Pamotan, Rembang Regency, in enhancing teachers' pedagogical competence. A qualitative case study design was employed, with data collected through in-depth interviews, classroom observations, and document analysis. Thematic analysis was used to explore supervisory practices and their impact on teacher performance. The findings indicate that the principal applied a structured and collaborative supervision process, comprising planning, implementation, follow-up, and evaluation. However, limited integration of educational technology and innovative teaching strategies was observed, reducing the overall effectiveness in improving learning outcomes. The study concludes that systematic supervision, supported by technology integration, innovation, continuous professional development, and structured feedback, is essential for strengthening teachers' pedagogical competence and improving instructional quality.

1. Introduction

Teachers play a central role in ensuring the quality of education by managing classroom processes and learning outcomes. Law Number 14 of 2005 on Teachers and Lecturers classifies teacher competencies into four domains: professional, pedagogical, social, and personal. Article 5 emphasizes that pedagogical competence, in particular, involves the ability to manage student learning effectively. This aligns with the Regulation of the Director General of Teachers and Education Personnel (No. 2626/B/HK.04.01/2023), which defines pedagogical

competence as the capacity to create student centered learning environments that foster meaningful educational experiences. Similarly, Sugiyarto et al. (2025) affirm that pedagogical competence must focus on optimizing learning outcomes through a student oriented approach.

Pedagogical competence manifests in teachers' ability to establish a safe learning environment, conduct active and student-focused instruction, and implement effective assessment and feedback (Ramaliya, 2018). It is a blend of science and art, enabling educators to design, execute, and evaluate engaging, challenging, and responsive learning processes (Anwar, 2018; Halimah, Najmuddin, & Munawar, 2025). This competence not only underpins high-quality instruction but also enhances classroom dynamics through creative pedagogical strategies and meaningful teacher-student interaction (Mulyasa, 2017; Sholihudin & Astutik, 2024).

Several factors influence the development of pedagogical competence, such as academic background, teaching experience, professional development, reflective practice, and school support systems (Mulyasa, 2017). At SD Negeri 1 Pamotan, these factors appear to be under-optimized. According to Taufik and Sauri (2025), the limited innovation in lesson planning is linked to insufficient academic supervision, which ultimately affects the quality of learning. Based on the Education Report Card, SD Negeri 1 Pamotan achieved only 71.47% in innovative learning practices and 77.25% in the instructional leadership of the principal both below the minimum standard of 80% (Disdikbud, 2023). These findings highlight the urgent need to enhance teachers' pedagogical competence through targeted supervision. Hariyanto and Indi (2024) further support this by emphasizing that weak learning quality often stems from inadequate academic supervision by school leaders. These quantitative indicators are consistent with qualitative observations within the school, suggesting that the shortcomings in innovative learning and instructional leadership are symptomatic of deeper pedagogical challenges faced by teachers

Additionally, data from the School Self Evaluation (EDS) show that many teachers lack consistency in applying student centered strategies and seldom participate in professional development. The principal’s academic supervision also reveals gaps in pedagogical practice ranging from underdeveloped lesson plans to limited use of active learning. Ading (2022) confirms that teachers who rarely engage in supervision and training tend to produce lower student achievement. This situation underscores the importance of the principal's role as an academic supervisor. Permendikbudristek No. 25 of 2024 mandates that principals supervise and guide teachers to improve professional competence. Supervision, when executed effectively, contributes not only to better teaching practices but also to student outcomes (Sholihudin & Astutik, 2024).

Several challenges remain, particularly at the primary school level. While many studies have addressed the role of principals in enhancing pedagogical competence, some important gaps persist: (1) Contextual limitations: Most prior research focuses on secondary or religious schools rather than primary education (Sugiyarto et al., 2025; Sulistyani, 2021). (2) Supervision models: Alternative approaches like the

BAGJA model remain underexplored in the context of elementary schools (Hariyanto & Indi, 2024; Slamet, 2021). (3) Lack of follow up evaluation: Many studies overlook the significance of post-supervision feedback and improvement plans (Hirsal, 2022; Taufik & Sauri, 2025). (4) Limited exploration of the principal's supervisory role: Few studies deeply examine how principals carry out supervisory duties to support pedagogical growth (Ain & Shahib, 2025; Mulyono, 2024).

To address these gaps, this study explores the principal's role as a supervisor in improving pedagogical competence at state elementary school 1 Pamotan, Rembang Regency. The objectives are as follows: (1) To analyze how the principal plans supervision for improving pedagogical competence. (2) To examine how supervision is implemented in practice. (3) To assess the follow-up actions taken based on supervision findings. (4) To evaluate the effectiveness of the supervision in enhancing pedagogical competence. Pedagogical competence encompasses not only instructional skills but also the ability to create meaningful and responsive learning environments (Ariyanti, Herlambang, & Muhtar, 2024; Mulyasa, 2017). It includes designing lessons tailored to student needs, implementing adaptive methods, and conducting evaluations with constructive feedback (Rusman, 2018). This competence is shaped by academic training, experience, reflective practice, school leadership support, and access to educational technology (Sagala, 2016; Tishana et al., 2023). Improving pedagogical competence requires sustained effort. Strategies such as classroom observations, reflective feedback, training programs, and peer collaboration (KKG/MGMP) are crucial (Handayani, 2023; Wiyani, 2020). The principal's role in guiding and facilitating these strategies is critical to teacher growth (Mulyasa, 2017; Satori & Komariah, 2016).

Finally, supervision by the principal must be conducted systematically across four stages: planning, implementation, follow-up, and evaluation. Principals must identify teachers' needs, observe instruction, provide actionable feedback, and assess the impact of their supervision programs (Glickman, Gordon, & Ross-Gordon, 2018; Wahjosumidjo, 2020). Through this comprehensive approach, principals can significantly contribute to improving pedagogical competence and ultimately, student learning outcomes. Therefore, this study aims to analyze the planning, implementation, follow up, and evaluation of the principal's supervision in enhancing teachers' pedagogical competence at state elementary school 1 Pamotan, Rembang Regency.

2. Methodology

This study uses a qualitative approach with a case study research design. A qualitative approach was chosen to provide an in depth understanding of the role of the school principal as a supervisor in improving teachers' pedagogical competencies (Arikunto, 2019; Sugiyono, 2020). This approach allows the researcher to explore data comprehensively in the context of social and educational settings (Creswell, 2018). A case study was selected because it enables the researcher to analyze phenomena within a specific time and place, such as at SD

Negeri 1 Pamotan in Rembang Regency (Riduwan, 2021). The research was conducted at state elementary school 1 Pamotan in Rembang Regency. The research subjects consisted of the school principal, teachers, and school supervisors, who were selected based on their roles in supervision activities relevant to this study's context (Sagala, 2016; Sudrajat, 2018).

Data collection was carried out through three main techniques: interviews, observation, and documentation. A semi-structured interview technique was used to gather in depth information from the school principal, teachers, and supervisors regarding the implementation of academic supervision and its impact on teachers' pedagogical competencies (Glickman et al., 2018; Handayani, 2023). Direct observation was conducted to observe how the school principal carried out supervision of teachers (Mulyasa, 2017; Riduwan, 2021) and to assess the teaching processes conducted by teachers and the supervision activities by the principal (Wahjosumidjo, 2020). Documentation was used to support the findings from interviews and observations, such as reports of supervision results and educational evaluations (Rusman, 2018).

The collected data were analyzed using the qualitative analysis technique proposed by Miles and Huberman. This process includes three main stages: data reduction, data presentation, and drawing conclusions (Creswell, 2018). In the data reduction stage, the researcher selected data that was relevant to the research objectives. The data presentation stage involved organizing the data in a more structured form. The final stage is drawing conclusions, where the researcher formulated findings based on the collected data (Satori & Komariah, 2016; Sugiyono, 2020). To ensure the validity of the data, this study employed triangulation, which involves comparing data obtained from interviews, observations, and documentation (Arikunto, 2019). Additionally, member checking was carried out to ensure the accuracy of the data collected. The validity of this study was maintained by using source triangulation and data collection techniques. This approach minimizes the possibility of bias and enhances the credibility of the findings (Wahjosumidjo, 2020). This study was conducted in several stages as follows: (1) Preparation stage: Preparing the research instruments and planning data collection, (2) Data collection stage: Conducting interviews, observations, and gathering documentation, (3) Data analysis stage: Analyzing the data using qualitative analysis methods, (4) Report writing stage: Organizing the analysis results into a research report.

3. Results and Discussion

This study explored the role of the school principal as a supervisor in enhancing teachers' pedagogical competence at state elementary school 1 Pamotan, Rembang Regency, through interviews, observations, and document analysis. While each data source provided distinct insights, triangulation of these findings revealed recurring themes: structured supervision practices, limited integration of technology in teaching, and the need for professional development that focuses on innovative pedagogical strategies.

Interviews with the school principal, teachers, and school supervisor revealed a shared perception of the principal's strong commitment to academic supervision, particularly in planning and mentoring. The principal emphasized a collaborative approach, supporting teachers through guidance rather than rigid evaluation. Most teachers acknowledged the positive influence of supervision on their instructional practice. However, there was consistent feedback on the lack of emphasis on technology integration in both teaching and supervision activities. School supervisors echoed this concern and called for training programs that enhance digital literacy among teachers. The detailed perspectives and recurring themes emerging from these interviews are summarized in table 1.

Table 1. Interview Results with the School Principal and Teachers

Aspect Obtained	School Principal	Teachers	School Supervisor
Implementation of Supervision	Supervision is structured, focusing on planning and follow-up	Feels supervision has a positive impact, but not fully technology-based	Supervision is running well but needs more technology-based training
Supervision Approach	Collaborative and provides discussion space	Limited use of technology, more lecture-based methods	Encourages further development in technology usage
Role of the Principal	Acts as a mentor and motivator in improving teaching quality	Provides feedback and support for teachers, but needs to be more in-depth	The principal needs to increase support in technology-based mentoring

The data in Table 1 show that supervision at state elementary school 1 Pamotan is generally well structured and collaborative, with both the principal and teachers recognizing its positive impact on teaching quality. However, across all respondent groups, there is a recurring concern about the limited integration of technology in both teaching and supervision activities. While the principal's mentoring role is valued, the absence of explicit strategies for developing teachers' digital pedagogy represents a missed opportunity to meet the demands of 21st century learning.

Observations of classroom activities and supervision practices further substantiated the interview findings. While the principal actively observes classroom instruction and provides verbal feedback, teaching remains predominantly teacher centered, relying heavily on lectures and rote learning. Technology use was minimal and inconsistent, with most instructional tools still limited to blackboards and printed materials. To provide a clearer depiction of these observations and their relation to supervisory practices, the detailed results are summarized in table 2**.**

Table 2 shows that classroom instruction at SD Negeri 1 Pamotan is still dominated by lectures and Q&A, with minimal technology use limited to blackboards and printed materials. While the principal gives constructive feedback and promotes innovation, these efforts have not led to significant changes in practice. Student engagement remains modest, and the absence of structured mentoring or targeted training hampers the adoption of student centered, technology enhanced learning.

A more systematic follow up, including coaching and practical workshops, is needed to bridge the gap between recommendations and implementation.

Table 2. Observation Results on Supervision and Teaching

Observed Aspect	Classroom Observation Results	Principal's Supervision	Observed Aspect
Teaching Methods	Dominantly uses lectures and Q&A; learning is still teacher-centered	The principal gives positive feedback and suggests innovative methods	Teaching Methods
Use of Technology	Minimal use of technology, most teaching materials are text-based and chalkboard	The principal encourages the use of technology, but it is not well integrated	Use of Technology
Classroom Management	Teachers manage the classroom well, though student engagement is limited	Observation focuses on classroom management and improving student-teacher interaction	Classroom Management

The review of school documents including supervision reports, education reports, and school self evaluation corroborated the interview and observation results. Supervision is conducted regularly, and its planning aligns with the school's strategic objectives. However, the follow-up mechanisms, particularly those related to digital pedagogy and innovative teaching practices, remain underdeveloped. The supervision reports also provide limited documentation on how feedback is systematically transformed into concrete teacher development initiatives. To present these findings in greater detail, the results of the document review are summarized in table 3.

Table 3. Document Review Results

Document Type	Findings Obtained
Supervision Report	Supervision is structured, but needs additional technology based training
Education Report	Teachers' competencies in using technology remain low and require further strengthening
School Self-Evaluation	There are efforts to improve teacher competencies through supervision, but innovation in teaching is not fully addressed

The findings in Table 3 show that while supervision at state elementary school 1 Pamotan is structured and aligned with school goals, its developmental impact remains limited. Follow up actions, especially in technology integration and innovative teaching, are not systematically implemented. Supervision reports focus on procedural aspects but provide little evidence of how feedback leads to concrete teacher development. Both the education report and school self evaluation highlight persistent gaps in digital pedagogy, indicating the need for targeted training and innovation focused interventions to achieve sustainable improvements in teacher competence.

To synthesize the qualitative findings across methods, a thematic network was developed to illustrate the interconnected elements of the supervision process. The diagram (Figure 1) demonstrates how each stage planning, implementation, follow-up, and evaluationcontributes to improving teachers' pedagogical competence, while also revealing bottlenecks such as limited digital integration and insufficient innovation support.

Figure 1. Thematic Network Diagram

The thematic network diagram visualizes eight key themes emerging from the data: (1) Supervision planning: Supervision activities are well organized and aligned with the school's vision. Instruments and targets are clearly stated, focusing on pedagogy. (2) Supervision implementation: Classroom observations are routinely conducted, but supervision lacks modeling or co teaching opportunities that demonstrate innovative practices. (3) Supervision follow up: Feedback is provided, but systematic follow up such as coaching or tech-specific training is weak or inconsistent. (4) Supervision evaluation: Assessment of teacher progress is conducted, but often lacks reflective tools or self assessment components to foster teacher autonomy. (5) Pedagogical competence development: Teachers improve basic instructional planning and management but lag in applying modern and student centered strategies. (6) Technology use in teaching: Identified as a major gap, teachers require structured, hands on training to integrate digital tools effectively. (7) Innovative Teaching Methods: While encouraged, there is limited scaffolding to help teachers move from conventional to inquiry or project based learning. (8) Classroom management: While discipline and structure are maintained, opportunities to create dynamic, student engaged environments are not fully realized.

In sum, the principal at state elementary school 1 Pamotan demonstrates a structured and collaborative supervisory approach, which contributes positively to teachers' pedagogical development. However, a key limitation is the inadequate follow up on technology integration and innovation in instructional practices. Bridging this gap requires a more strategic alignment between supervision

feedback, professional development, and classroom application. Thematic analysis confirms that while procedural supervision is in place, its transformational impact remains limited, calling for enhanced mentoring systems and the use of data to drive targeted interventions.

Supervision planning, as emphasized by Albab (2021) and Kristiawan et al. (2023), is a foundational step that determines the effectiveness of subsequent supervisory activities. The principal of state elementary school 1 Pamotan exemplifies this view by demonstrating structured planning, including the preparation of instruments, setting of goals, and determination of success indicators. This aligns with the theoretical model of Kristiawan et al. (2023), which advocates systematic planning. However, what distinguishes the case at state elementary school 1 Pamotan is the integration of context specific needs into the planning process. Rather than applying a generic supervision model, the principal gathers data through informal discussions, staff meetings, and initial observations an approach consistent with Fiandi (2023), who advocate for flexible and creative planning tailored to teachers' diverse needs. The findings show that the planning at SD Negeri 1 Pamotan is not merely administrative but responsive, particularly in addressing pedagogical weaknesses like instructional clarity and classroom interaction. However, the supervision plan at state elementary school Negeri 1 Pamotan has not fully accommodated technological development, which is increasingly crucial in 21st-century learning. While Slamet (2021) and Sahudi et al. (2023) stress the need for supervision planning to evolve with educational and technological dynamics, the empirical evidence indicates that the school's plan still lacks integration of digital pedagogical components, representing a partial gap between theory and practice. Therefore, this study extends previous findings by showing how supervision planning may be structurally sound yet limited in scope if it overlooks the digital dimension.

According to Anjarsari and Doloh (2024) and Ibrahim et al. (2024), effective implementation of supervision involves systematic classroom observation and constructive feedback. This model is largely reflected in the practice of the principal at state elementary school 1 Pamotan, where direct observations are routinely followed by feedback sessions that promote teacher reflection. Teachers confirmed that such feedback helps them improve lesson preparation and student interaction, supporting the developmental focus highlighted by Purnama (2021). However, while the process appears consistent, the content of the supervision remains limited in innovation. This study found that the principal's feedback rarely touches upon the integration of ICT or interactive methodologies, even though literature (e.g., Berlian (2022); Ibrahim et al. (2024) stresses the importance of promoting digital tools and student-centered strategies. The principal's focus remains largely on discipline, classroom control, and content accuracy, aligning more with traditional supervisory approaches. This mismatch shows that while implementation at SD Negeri 1 Pamotan conforms to general supervisory principles, it does not fully meet the evolving pedagogical demands outlined in current scholarship, particularly regarding the use of technology and inquiry based learning. This gap contributes new insight into how supervision may still reinforce conventional teaching unless deliberately steered toward innovation. Moreover, although the principal

occasionally organizes group supervision (seminars, discussions), these are irregular and not consistently followed up with practical classroom application. This weakens the collaborative learning culture proposed by Ibrahim et al. (2024), who argue that effective supervision must create continuous, peer supported growth among teachers.

The literature (Arifin, 2019; Hirsal, 2022) emphasizes that the success of academic supervision hinges on follow up actions such as coaching and professional development. At state elementary school 1 Pamotan, follow up is present but remains largely functional focused on administrative corrections rather than transformative teacher support. The principal does hold review meetings and makes brief notes about areas for improvement, but structured coaching, especially targeted at identified weaknesses like digital pedagogy, is still absent. While Hirsal (2022) and Mukhtamiroh et al. (2024) suggest a combination of direct mentoring and indirect training, the study found that follow up at state elementary school 1 Pamotan rarely takes the form of formal training or individualized teacher mentoring. This contrasts with the literature that frames follow-up as a dynamic developmental process. Therefore, the case of state elementary school 1 Pamotan highlights a common but under addressed issue in school supervision practice: the gap between identifying teacher weaknesses and actually addressing them through strategic interventions**.** Another missed opportunity involves the use of technology in follow-up actions, such as online mentoring or digital evaluation tools. As noted by Husin (2023) and Wibowo (2018), innovative follow up methods are necessary to accelerate teacher development. This study shows that in the absence of such tools, teachers at state elementary school 1 Pamotan continue to rely on traditional, manual feedback loops, which may slow down progress.

The final stage of supervision evaluation is intended to assess both the process and its impact, as noted by Karyati (2020) and Saman and Hasanah (2024). In practice, the principal at state elementary school 1 Pamotan does conduct evaluations using documentation and summary reports, but these are mainly descriptive and lack analytical depth. Although the evaluation activities reflect the basic structure recommended by Nurhayati (2021) and Putra and Lestari (2022), they do not yet measure teacher improvement in a meaningful, data driven way. For example, the evaluation documents reviewed in this study showed checklists and general notes, but no evidence of tracking teacher progress over time based on clear indicators, as suggested by Wahyuni and Hidayat (2022). Thus, evaluation at state elementary school 1 Pamotan remains compliance oriented rather than improvement-oriented. Furthermore, the principal's evaluation activities do not sufficiently involve other stakeholders such as education supervisors or teacher peers. This diverges from the cooperative evaluation approach promoted by Dewi and Prasetyo (2020), which calls for participatory reflection to strengthen ownership and relevance of the evaluation outcomes.

This study contributes to the existing body of knowledge by providing a contextualized understanding of how supervision practices operate at the school level in a rural Indonesian setting. The findings confirm that structured supervision planning and regular implementation do exist, aligning with theoretical

expectations. However, the study reveals critical limitations in depth, innovation, and technology integration, which are less frequently discussed in the literature. By doing so, this research: (1) Extends current theory by showing that structurally correct supervision may still fall short in quality if it lacks digital orientation. (2) Challenges the assumption that supervision automatically leads to teacher innovation, emphasizing the need for targeted follow up. (3) Adds empirical evidence to support the claim that many supervision evaluations remain formalistic rather than developmental. Therefore, while the case of state elementary school 1 Pamotan reflects general alignment with established models of supervision, e.g., Kristiawan et al., (2023); Purnama (2021), it also illustrates practical deviations and missed opportunities, particularly in fostering pedagogical innovation and integrating 21st century competencies

4. Conclusion

This study demonstrates that the principal of State Elementary School 1 Pamotan plays a central role in enhancing teachers' pedagogical competence through a structured and collaborative academic supervision process. The four stages planning, implementation, follow up, and evaluation have been applied effectively, fostering a supportive environment for teacher development. Findings indicate that supervision has positively influenced teaching practices, particularly in improving lesson planning, classroom management, and the use of active learning strategies. However, technology integration and innovative instructional approaches remain underdeveloped. Addressing these gaps will strengthen the relevance and responsiveness of supervision to the demands of 21st century education. The research successfully identifies actionable areas for improvement. It shows that embedding digital pedagogy and innovation into supervision planning, supported by systematic follow up and sustained professional assistance, can lead to more significant and lasting improvements in instructional quality. This aligns with the study's objectives to examine how supervision is planned, implemented, followed up, and evaluated, and to assess its effectiveness in enhancing pedagogical competence.The success of this study lies in its ability to capture the interconnected perspectives of the principal, teachers, and supervisors through interviews, observations, and document analysis, providing a comprehensive picture of the supervision process. The structured methodology allowed for rich thematic insights, reinforcing the value of collaborative supervision in driving teacher growth.

References

Ading, N. (2022). Implementasi supervisi akademik dalam meningkatkan kompetensi guru dan hasil belajar siswa. *Cetta: Jurnal Ilmu Pendidikan*, *5*(3), 206–220.

Ain, W. F. K., & Shahib, M. W. (2025). Peran kepala sekolah sebagai supervisor dalam meningkatkan kompetensi pedagogik guru di SMP negeri 3 Doplang. *Ideguru: Jurnal Karya Ilmiah Guru*, *10*(2), 1357–1363. https://doi.org/10.51169/ideguru.v10i2.1798

Albab, A. (2021). Perencanaan supervisi akademik kepala sekolah dalam meningkatkan kualitas pembelajaran. *Jurnal Pendidikan Dan Pembelajaran*, *8*(2), 2024.

Anjarsari, R., & Doloh, M. (2024). Implementasi supervisi pendidikan di sekolah dasar. *Tarbawiyah: Jurnal Ilmiah Pendidikan*, *8*(2). https://doi.org/10.32332/tarbawiyah.v8i2.9817

Anwar, B. (2018). Kompetensi pedagogik dalam meningkatkan kualitas pembelajaran di sekolah dasar. *Jurnal Pendidikan*, *15*(2), 123–134.

Arifin, Z. (2019). Strategi tindak lanjut supervisi dalam meningkatkan kompetensi guru. *Jurnal Pendidikan Dan Pembelajaran*, *6*(1), 45–54.

Arikunto, S. (2019). *Prosedur penelitian: Suatu pendekatan praktek (11th ed.)*. Bandung: Rineka Cipta.

Ariyanti, N., Herlambang, Y. T., & Muhtar, T. (2024). Kompetensi pedagogik guru dalam meningkatkan kualitas pembelajaran di sekolah dasar. *Jurnal Pendidikan Dasar*, *14*(3), 232–245.

Berlian, Z. (2022). *Pelaksanaan Supervisi Pendidikan*. Palembang: Repository Raden Patah.

Creswell, J. W. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.)*. Los Angeles: Sage Publication

Dewi, L., & Prasetyo, H. (2020). Evaluasi berkelanjutan dalam supervisi pendidikan. *Jurnal Pendidikan Dan Kebudayaan*, *6*(1), 15–25.

Disdikbud. (2023). *Rapor pendidikan SD Negeri 1 Pamotan, Rembang Tahun 2023*. Rembang.

Fiandi, F. (2023). Kreativitas dan fleksibilitas dalam perencanaan supervisi pendidikan. *Jurnal Supervisi Pendidikan*, *10*(1), 45–56.

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2018). *Supervision and instructional leadership: A developmental approach (10th ed.)*. London: Pearson Education.

Halimah, S., Najmuddin, & Munawar. (2025). Supervisi akademik melalui pelaksanaan pelatihan dalam meningkatkan kompetensi pedagogik guru di TK Negeri Se-Kabupaten Bireuen. *Jurnal Pengabdian Masyarakat Dan Riset Pendidikan*, *3*(3), 194–203. https://doi.org/10.31004/jerkin.v3i3.378

Handayani, T. (2023). Pengembangan kompetensi pedagogik melalui pelatihan dan supervisi bagi guru. *Jurnal Pendidikan Dan Pengajaran*, *8*(2), 101–112.

Hariyanto, W., & Indi, A. (2024). Sistem manajemen supervisi akademik sebagai kontrol mutu kompetensi pedagogik guru di lembaga pendidikan madrasah. *Southeast Asian Journal of Islamic Education Management*, *5*(1), 91–106. https://doi.org/10.21154/sajiem.v5i1.323

Hirsal, M. (2022). Peran kepala sekolah dalam tindak lanjut supervisi akademik. *Jurnal Manajemen Pendidikan*, *10*(2), 112–123.

Husin, M. (2023). Inovasi tindak lanjut supervisi berbasis teknologi. *Jurnal Pendidikan Teknologi*, *7*(1), 33–42.

Ibrahim, S. A., Annur, I., & Rahma, I. (2024). Pelaksanaan supervisi kinerja guru di sekolah dasar. *Dirasah*, *7*(1).

Karyati, R. (2020). Monitoring dan evaluasi supervisi akademik sebagai upaya untuk meningkatkan kompetensi kepala sekolah binaan kepengawasan Kota Malang. *Jurnal Pendidikan Hayati*, *6*(3). https://jurnal.stkipbjm.ac.id/index.php/JPH/article/view/1190

Kristiawan, M., Sari, D. P., & Wahyuni, L. (2023). Meninjau kembali prinsip dan perencanaan supervisi pendidikan. *Al Idaroh*, *15*(2), 112–126.

Mukhtamiroh, N., Rusiani, R., & Subandi, S. (2024). Efektivitas tindak lanjut supervisi melalui pelatihan dan workshop. *Jurnal Pengembangan Pendidikan*, *9*(3), 78–89.

Mulyasa, E. (2017). *Manajemen pembelajaran berbasis kompetensi*. Bandung: Remaja Rosdakarya.

Mulyono, A. (2024). Evaluasi supervisi akademik kepala sekolah: Studi di sekolah dasar. *Jurnal Manajemen Pendidikan*, *11*(1), 55–56.

Nurhayati, S. (2021). Kendala pelaksanaan evaluasi supervisi di sekolah dasar. *Jurnal Pendidikan Dasar*, *7*(2), 44–53.

Purnama, G. K. (2021). Pelaksanaan supervisi akademik kepala sekolah. *Jurnal Pendidikan*, *37*(2), 92–100. https://doi.org/10.24246/j.sw.2021.v37.i2.p92-100

Putra, A., & Lestari, D. (2022). Peningkatan kapasitas supervisor dalam evaluasi supervisi. *Jurnal Pengembangan Pendidikan*, *8*(3), 90–101.

Ramaliya, I. (2018). Kompetensi pedagogik guru dan implementasinya dalam pembelajaran yang efektif. *Jurnal Pendidikan Dasar*, *7*(3), 210–220.

Riduwan. (2021). *Skala pengukuran variabel-variabel penelitian*. Bandung: Alfabeta.

Rusman, R. (2018). *Model-model pembelajaran berbasis kompetensi*. Bandung: Rajawali Pers.

Sagala, S. (2016). *Manajemen Strategik dalam Peningkatan Mutu Pendidikan*. Bandung: Alfabeta.

Sahudi, M., Kristiawan, M., & Wahyudi, L. (2023). Integrasi nilai keagamaan dalam perencanaan supervisi pendidikan Islam. *Jurnal Pendidikan Islam*, *11*(1), 33–44.

Saman, A. M., & Hasanah, E. (2024). Peran kepala sekolah dalam melaksanakan supervisi akademik sebagai upaya peningkatan kompetensi guru. *JIIP-Jurnal Ilmiah Ilmu Pendidikan*, *7*(2), 1913–1920. https://doi.org/10.54371/jiip.v7i2.2512

Satori, D., & Komariah, A. (2016). Supervisi pendidikan dalam meningkatkan kualitas pengajaran di sekolah. *Jurnal Pendidikan Indonesia*, *10*(1), 45–58.

Sholihudin, B., & Astutik, A. P. (2024). Supervisi kepala sekolah dalam membina kompetensi pedagogik guru PAI. *Modeling: Jurnal Program Studi PGMI*, *11*(1), 980–990.

Slamet, S. (2021). Perencanaan dan pelaksanaan supervisi akademik di sekolah dasar. *Jurnal Supervisi Pendidikan*, *9*(4), 45–57.

Sudrajat. (2018). *Manajemen pendidikan dan supervisi pendidikan*. Bandung: Bumi Aksara.

Sugiyarto, Y., Yuliejantiningsih, Y., & Haryati, T. (2025). Pengaruh supervisi akademik kepala sekolah terhadap kompetensi pedagogik guru SD Negeri Dabin II Kecamatan Todanan Kabupaten Blora. *Jurnal Manajemen Pendidikan Dan Ilmu Sosial*, *6*(3), 1884–1894. https://doi.org/10.38035/jmpis.v6i3.4427

Sugiyono. (2020). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif, dan R&D (14th ed.)*. Bandung: Alfabeta.

Sulistyani, S. (2021). Supervisi Akademik Kepala Sekolah Dasar untuk

Meningkatkan Kinerja Guru di Masa Pandemi Covid-19 (Studi Kasus di SD 1 Prambatan Kidul Kudus Tahun 2020). *Media Penelitian Pendidikan: Jurnal Penelitian Dalam Bidang Pendidikan Dan Pengajaran*, *15*(1), 37–49. https://doi.org/10.26877/mpp.v15i1.8384

Taufik, A. M., & Sauri, R. S. (2025). Optimalisasi Peran Kepala Sekolah dalam Supervisi Akademik untuk Peningkatan Kompetensi Pedagogik Guru Sekolah Dasar. *Jurnal Manajemen Pendidikan Dan Ilmu Sosial*, *6*(4), 2756–2764. https://doi.org/10.38035/jmpis.v6i4.4924

Tishana, D., Gitman, S., & Ernawati, R. (2023). Kompetensi pedagogik guru di era digital: Implikasi terhadap pembelajaran berbasis teknolog. *Jurnal Pendidikan Teknologi*, *5*(2), 89–101.

Wahjosumidjo, S. (2020). *Manajemen pendidikan di sekolah dasar: Teori, strategi, dan implementasi*. Yogyakarta: Universitas Negeri Yogyakarta Press.

Wahyuni, S., & Hidayat, R. (2022). Pengukuran dampak supervisi terhadap kompetensi pedagogik guru. *Jurnal Pendidikan*, *10*(3), 99–108.

Wibowo, A. (2018). Model tindak lanjut supervisi yang efektif di sekolah dasar. *Jurnal Ilmiah Pendidikan*, *5*(4), 101–110.

Wiyani, D. (2020). Peran kepala sekolah dalam supervisi pembelajaran: Perspektif teori dan praktik. *Jurnal Kepemimpinan Pendidikan*, *7*(3), 200–213.

How to cite this article:

Nikmah, N., Haryati., & Sumarno. (2025). Optimalization of the Role of the School Principal as a Supervisor for Enhancing Teachers' Pedagogical Competence: A Quantitative Study at State Elementary School 1 Pamotan Rembang Regency. *Journal of Educational Sciences*, *9(5)*, 3521-3533.