Quality Management of Principal Academic Supervision for Enhancing Teacher Pedagogical Competence: A Comparative Case Study of Two Indonesian Elementary Schools

Muthi Fadhilah
Department, Islamic University of Nusantara, Bandung, Indonesia

Eva Dianawati Wasliman
Department, Islamic University of Nusantara, Bandung, Indonesia

*Corresponding Author: muthifadilah@gmail.com

Abstract
Teacher pedagogical competence remains critical for educational quality, yet many teachers struggle with planning, implementing, and evaluating instruction effectively. Academic supervision represents a vital quality management mechanism, though limited research examines how principals systematically integrate quality management principles into supervision practices. This study investigated quality management approaches to principal academic supervision in enhancing teacher pedagogical competence through comparative analysis of two elementary schools. A qualitative multiple case study design was employed at SDN 164 Karangpawulang and SDN 033 Asmi Bandung. Data were collected through semi-structured interviews with 12 participants (principals, vice principals, teachers), classroom observations, and document analysis. Thematic analysis following Braun and Clarke's framework was conducted to identify patterns across planning, implementation, evaluation, and follow-up stages. Both schools successfully implemented systematic supervision cycles aligned with quality management principles, though employing distinct approaches. SDN 164 emphasized standardized instruments from the Merdeka Mengajar Platform and Employee Performance Target integration, while SDN 033 excelled in collaborative supervision incorporating lesson study principles and reflective practices. Teachers demonstrated significant improvements in pedagogical competencies, translating into enhanced student engagement and learning outcomes. Effective supervision quality management requires balancing standardization with contextualization, evaluation with professional growth. The study advances theoretical integration of instructional leadership, quality management, and collaborative learning frameworks while offering actionable strategies for practitioners.

INTRODUCTION

Quality education remains a fundamental pillar for national development, with teachers serving as the primary agents in achieving educational excellence (UNESCO, 2014). Teachers constitute the most crucial element in the implementation of educational processes within schools, as without their presence, teaching and learning activities would not materialize (Arsini et al., 2023). Beyond their instructional responsibilities, teachers fulfill multifaceted roles encompassing professional, humanitarian, and social dimensions, including education, teaching, and training functions (Sanjani, 2020). The effectiveness of teachers in facilitating student comprehension and engagement fundamentally shapes educational outcomes, making their professional development a critical priority for educational institutions (Darling-Hammond et al., 2017; Yestiani & Zahwa, 2020).

Central to teacher effectiveness is the possession of comprehensive competencies that enable optimal performance in their professional duties. Teacher competence encompasses a set of knowledge, skills, and attitudes that educators must possess, understand, and master to fulfill their responsibilities as learning facilitators at primary, secondary, and early childhood education levels (Gess-Newsome et al., 2019). These competencies include pedagogical abilities, personality development, professionalism,

and social skills (Fakhruddin et al., 2023). Among these, pedagogical competence emerges as particularly fundamental, encompassing teachers' capabilities in managing the instructional process, specifically in planning, implementing, and evaluating learning activities (Mariscal et al., 2023). However, contemporary educational practice reveals persistent challenges in this domain, with numerous teachers demonstrating insufficient mastery of pedagogical competencies, consequently compromising the quality of learning processes (Cahyana & Agustin, 2024; Murdock et al., 2020).

Empirical evidence indicates that substantial gaps exist in teachers' pedagogical practices across educational institutions globally. In low- and middle-income countries, teachers frequently lack the essential skills needed to teach effectively, with studies across seven African countries revealing that only seven percent of fourth-grade teachers possessed minimum knowledge necessary to teach language (Bold et al., 2017; Popova et al., 2022). Teachers frequently encounter difficulties in developing comprehensive lesson plans, utilizing available technological resources, and implementing effective assessment strategies (Özen & Yıldırım, 2020). These challenges manifest in various forms, including suboptimal classroom management, inappropriate student grouping in collaborative activities, inadequate use of learning media, and assessment practices that fail to comprehensively monitor student learning achievements. Furthermore, many educators have not fully optimized critical elements within lesson planning, particularly regarding the selection of appropriate learning methods, design of learning activities, evaluation of learning outcomes, and utilization of suitable resources and media (Osakwe, 2014). These deficiencies underscore the urgent need for systematic interventions to enhance teachers' capabilities in classroom management, instructional media utilization, and the development of varied, student-centered assessment approaches.

Despite extensive research on teacher professional development, a significant knowledge gap persists regarding the mechanisms through which school leadership can effectively enhance pedagogical competencies through quality management approaches. While previous studies have examined academic supervision in isolation (Hoque et al., 2020), limited research has investigated how principals systematically integrate quality management principles into supervision practices to achieve sustainable improvements in teacher pedagogical competence. Existing studies on instructional supervision and curriculum integration have primarily focused on these factors separately, leaving a distinct gap in research exploring their combined impact on educational quality, especially in cross-cultural contexts (Wahidah et al., 2024). Particularly underexplored is the comparative analysis of different quality management approaches in academic supervision across diverse school contexts, which could illuminate best practices and contextual factors influencing implementation effectiveness. This gap is particularly evident in Indonesian elementary education, where the implementation of the Merdeka Curriculum demands enhanced pedagogical sophistication yet lacks comprehensive frameworks for quality-managed supervision.

Academic supervision represents a critical mechanism within educational quality management systems for addressing these pedagogical challenges. As Glickman et al. (2007) define it, academic supervision constitutes a series of activities designed to help teachers develop their ability to manage the learning process to achieve educational objectives. Muhsin et al. (2023) assert that academic supervision must be recognized as an essential component of education quality management, involving experienced educators providing systematic support to enhance instructional quality. Research demonstrates that academic supervision has a significant and positive influence on the quality of teacher instruction in schools (Mardalena et al., 2020). The pivotal roles of school principals and education supervisors in advancing teacher professionalism have been well documented (Gaol & Siburian, 2018), emphasizing that effective supervision extends beyond mere knowledge transmission to encompass comprehensive understanding and execution of professionally mandated responsibilities (Sihaloho, 2022).

This study addresses the identified knowledge gap by investigating quality management approaches to principal academic supervision in enhancing teacher pedagogical competence through a comparative case study of SDN 164 Karangpawulang and SDN 033 Asmi Bandung. These institutions

were selected based on preliminary observations indicating distinct challenges in pedagogical implementation that necessitate systematic supervision interventions. The research aims to obtain and analyze comprehensive data regarding how school principals manage the quality of academic supervision to improve teachers' pedagogical abilities, examining the planning, implementation, evaluation, and follow-up processes within quality management frameworks. By conducting an in-depth comparative analysis, this study seeks to identify effective practices, contextual factors, and potential models for optimizing academic supervision quality management.

The significance of this research lies in its potential to contribute both theoretical and practical insights to educational quality management. Theoretically, the study advances understanding of how quality management principles can be systematically applied to academic supervision practices, potentially bridging existing gaps between educational management theory and supervisory practice (Hannum, 2021). Practically, the findings offer actionable strategies for school principals and education administrators seeking to enhance teacher pedagogical competencies through improved supervision quality management. Furthermore, by comparing two distinct institutional contexts, the research provides nuanced understanding of how contextual factors influence supervision effectiveness, thereby supporting the development of more adaptable and sustainable models for educational quality improvement in elementary education settings. This aligns with global efforts to close learning data gaps and strengthen national assessment systems to monitor education quality (World Bank, 2024).

METHODS

This study employed a qualitative descriptive approach with a multiple case study design (Yin, 2014) to investigate the practice of quality management in academic supervision by school principals at SDN 164 Karangpawulang and SDN 033 Asmi. Case study methodology was selected because it enables researchers to explore contemporary phenomena within their real-life contexts (Baxter & Jack, 2008).

The research was conducted at two public elementary schools in Bandung, purposively selected based on preliminary observations indicating distinct yet complementary approaches to academic supervision quality management. Research participants comprised 12 individuals: two principals, two vice principals for curriculum, and eight teachers representing varied teaching experience levels and subject areas.

Data collection employed multiple methods to achieve methodological triangulation (Carter et al., 2014). Semi-structured interviews served as the primary method, conducted with all participants to explore their experiences and understanding of academic supervision quality management. Classroom observations documented supervision practices in action, while document analysis examined supervision schedules, observation instruments, feedback forms, and performance evaluations. To ensure rigor and trustworthiness, several validation strategies were implemented. Data credibility was established through prolonged engagement and member checking (Lincoln & Guba, 1985). Transferability was enhanced through thick description of the research context (Merriam & Tisdell, 2016). Confirmability was addressed through reflexive journaling where researchers documented their assumptions and decision-making processes (Shenton, 2004).

Data analysis followed Braun and Clarke's (2006) six-phase thematic analysis framework, commencing with data familiarization, initial coding, organizing codes into themes, reviewing themes, refining definitions, and producing the analysis report. Throughout this iterative process (Nowell et al., 2017), comparative analysis between the two schools identified similarities, differences, and complementary practices.

RESULTS AND DISCUSSION

Results

This section presents findings from the comparative case study examining quality management of principal academic supervision at SDN 164 Karangpawulang and SDN 033 Asmi Bandung. The results

are organized around four key stages of supervision: planning, implementation, evaluation, and follow-up, followed by challenges and solutions identified in each school.

Quality Management Planning for Principal Academic Supervision

At SDN 164 Karangpawulang, principals implemented structured planning by establishing systematic supervision schedules conducted at least twice annually. The school strategically utilized standardized observation instruments from the Merdeka Mengajar (PMM) Platform, including assessment formats and supervision notes aligned with government standards. The principal emphasized participatory supervision patterns, conducting pre-supervision consultations to identify teachers' obstacles and developmental needs.

SDN 033 Asmi adopted a collaborative and comprehensive planning approach. The principal and vice principal for curriculum jointly scheduled supervision activities from the beginning of the academic year. The school developed customized observation instruments featuring simple rubrics with descriptive categories, emphasizing coaching over administrative evaluation. Teachers were given opportunities to identify specific pedagogical competencies for observation based on their individual development needs.

Implementation of Principal Academic Supervision

At SDN 164 Karangpawulang, the principal and vice principal conducted direct classroom observations, documenting teaching methods, material delivery, classroom management, and teacher-student interactions. The school systematically collected data using PMM Platform standardized tools, with all documentation archived for future reference in coaching programs.

SDN 033 Asmi's implementation emphasized collaborative coaching through participatory observation structures. Direct classroom observations involved not only the principal and vice principal but also fellow teachers as observers, creating a multi-perspective supervision process. A significant finding concerned the psychological climate of supervision: the principal's explicit emphasis on supervision as guidance rather than fault-finding created a supportive environment where teachers felt comfortable demonstrating their best practices.

Evaluation of Principal Academic Supervision

At SDN 164 Karangpawulang, evaluation focused on comparing pre- and post-supervision teaching methods, with significant improvements noted in teachers' application of interactive methods and creative media utilization. Feedback delivery followed a strengths-based approach. Evaluation encompassed monitoring student learning outcomes as indicators of supervision success, with observations revealing increased student engagement and improved material comprehension.

At SDN 033 Asmi, evaluation emphasized comprehensive impact assessment across multiple dimensions. Teachers previously relying on lecture methods began implementing active learning strategies including group discussions and project-based learning. Teachers engaged in collective reflection through joint forums where supervisors first expressed appreciation before explaining improvement areas. Field observations documented higher student activity levels following teacher guidance through supervision.

Follow-up on Principal's Academic Supervision

SDN 164 Karangpawulang systematically implemented follow-up activities as continuation of previous processes. The school regularly prepared supervision reports documenting each activity, which were linked to Employee Performance Targets (SKP). Based on supervision findings, the school designed targeted teacher competency improvement programs including training activities, internal workshops, and focused group discussions. Supervision strategies underwent continuous refinement based on evaluation results.

SDN 033 Asmi's follow-up processes emphasized three interconnected components: supervision report preparation, teacher competency development programs, and supervision strategy improvement. Each supervision activity concluded with official report compilation uploaded to the PMM Platform. The principal and vice principal analyzed teacher needs to design appropriate development programs.

Strategic responses included delegating supervisory tasks to create more flexible supervision implementation and developing observation instruments better suited to teacher needs.

Constraints and Solutions in Academic Supervision Quality Management

Both schools faced interconnected challenges spanning human resources and facilities infrastructure. At SDN 164 Karangpawulang, challenges included limited teacher skill variation in employing teaching methods, heavy administrative responsibilities, and infrastructure limitations such as inconsistent internet connectivity and inadequate facilities. SDN 033 Asmi encountered similar challenges manifesting differently: senior teachers showed sensitivity to criticism while young teachers lacked emotional management, limited principal time due to administrative responsibilities, and infrastructure limitations including classrooms needing repairs and limited technological equipment.

Solutions at SDN 164 Karangpawulang emphasized continuous coaching through planned supervision programs, with senior teachers mentoring colleagues. The school maximized available facility use while seeking additional assistance through BOS funds and school committee cooperation. SDN 033 Asmi focused on creating positive supervision atmospheres prioritizing persuasive communication and strengthening teacher cooperation strategies through intergenerational mentorship. The principal's limited time was addressed by assigning tasks to the vice principal and senior teachers. Infrastructure solutions involved working with school committees to improve facilities and maximize BOS fund use efficiently.

Discussion

The findings from this comparative case study illuminate critical dimensions of quality management in academic supervision for enhancing teacher pedagogical competence. The supervision practices at both schools demonstrate strong alignment with established quality management principles. Both schools implemented Deming's Plan-Do-Check-Act (PDCA) cycle systematically through structured planning, deliberate implementation, comprehensive evaluation, and continuous follow-up processes (Sallis, 2014). However, the implementation revealed contextual variations: SDN 164 emphasized standardization through PMM Platform instruments and SKP integration, while SDN 033 prioritized collaborative processes and teacher agency. This divergence suggests that effective quality management requires balancing standardization with contextualization (Houston, 2007).

The principals' leadership approaches exemplify instructional leadership orientations emphasizing teaching and learning improvement (Hallinger & Wang, 2015). The participatory supervision patterns and collaborative observation structures align with contemporary conceptualizations of instructional leadership as distributed practice (Harris, 2013). The emphasis on creating supportive supervision climates reflects research indicating that psychological safety constitutes a critical condition for effective professional learning (Edmondson & Lei, 2014).

The documented improvements in teachers' pedagogical competencies provide empirical support for theoretical propositions regarding the relationship between systematic supervision and teacher professional development. Teachers demonstrated enhanced capabilities across key pedagogical dimensions: planning, implementation, and assessment (König et al., 2020; Blömeke et al., 2016). These improvements align with research indicating that effective professional development must be intensive, ongoing, content-focused, and embedded in practice (Darling-Hammond et al., 2017).

Particularly significant is the finding that improvements in teachers' pedagogical practices translated into observable changes in student learning experiences. This finding provides crucial empirical evidence for the supervision-teaching-learning quality chain theorized in educational effectiveness research (Creemers & Kyriakides, 2008).

An unexpected finding concerns the differential impact of supervision approaches on various teacher subgroups. Senior teachers initially showed resistance to observation, whereas younger teachers displayed greater openness but required support in emotional regulation. This finding resonates with teacher career stage theory suggesting that professional development needs vary across career phases (Day & Gu, 2010).

SDN 033 Asmi's integration of collaborative supervision with lesson study principles represents a distinctive contribution. This integration addresses a significant gap in supervision literature: while lesson study has been extensively studied as a professional development approach (Dudley, 2014), limited research has explored their systematic integration within school-based quality management systems. The benefits were substantial: teachers reported feeling less isolated, observers gained varied perspectives, and collective reflection generated richer insights (Little, 2002; Horn & Kane, 2015).

The integration of lesson study principles also addressed a critical quality management challenge: balancing standardization with professionalization. This tension reflects broader debates in educational quality management between technocratic and professional approaches (Ehren et al., 2013; O'Neill, 2013). The comparative findings suggest that optimal supervision systems may require hybrid models combining standardized frameworks with collaborative processes.

Both schools' experiences with technology illuminate contemporary challenges in digital transformation. SDN 164's systematic use of the PMM Platform exemplifies technology as an efficiency tool (Tondeur et al., 2017). However, technology integration revealed significant equity challenges: limited internet connectivity and insufficient devices created barriers potentially exacerbating educational inequalities (Selwyn, 2016).

The persistent infrastructure challenges highlight how school-level supervision operates within broader systemic constraints. While both schools demonstrated remarkable agency in addressing challenges through creative resource utilization, the findings underscore that supervision effectiveness cannot be entirely divorced from material conditions enabling quality teaching (Scheerens, 2016). Teachers' heavy administrative burdens created psychological stress affecting receptivity to feedback (Skaalvik & Skaalvik, 2017).

This study advances theoretical understanding through several contributions. First, it demonstrates that effective supervision quality management requires integrating multiple theoretical frameworks: instructional leadership, quality management principles, pedagogical content knowledge, and collaborative professional learning. Second, the study reveals that supervision effectiveness depends fundamentally on relational and cultural dimensions: psychological safety, trust, collegiality, and shared commitment to improvement (Wenger, 1998).

The findings offer several actionable insights for practitioners. Schools should develop hybrid supervision models combining standardized frameworks with collaborative processes. Supervision systems must intentionally cultivate supportive climates emphasizing growth over evaluation. Schools should develop differentiated supervision approaches accommodating diverse teacher needs. Principals facing time constraints should strategically distribute supervision responsibilities while maintaining oversight.

Study limitations include restricted generalizability from two-school case design, limited longitudinal data, and reliance primarily on self-reported data. Future research should employ larger samples across diverse contexts, conduct longitudinal studies tracking supervision effects over multiple years, and incorporate more objective outcome measures.

CONCLUSION

This comparative case study demonstrates that systematic quality management of principal academic supervision significantly enhances teacher pedagogical competence when implemented through structured, continuous, and supportive frameworks. Both SDN 164 Karangpawulang and SDN 033 Asmi successfully integrated quality management principles into supervision cycles encompassing planning, implementation, evaluation, and follow-up, yet employed distinct approaches: SDN 164 emphasized standardized instruments from the Merdeka Mengajar Platform and Employee Performance Target integration, while SDN 033 excelled in collaborative supervision through lesson study principles and reflective practices. These complementary approaches suggest that effective supervision systems require balancing standardization with contextualization, and evaluation with professional growth.

The study contributes theoretically by demonstrating how instructional leadership, quality management, and collaborative professional learning frameworks can be synthesized into comprehensive supervision models. It advances understanding of supervision-teaching-learning quality chains and reveals critical tensions between technocratic and professional approaches to educational quality management. Practically, findings offer actionable strategies for principals: developing hybrid supervision models, cultivating supportive climates, implementing differentiated approaches accommodating diverse teacher needs, and strategically distributing supervision responsibilities. However, persistent infrastructure constraints and administrative burdens highlight that school-level innovations, while significant, require supportive systemic policies providing adequate resources.

Study limitations include restricted generalizability from two-school case design, limited longitudinal data on long-term impacts, and reliance primarily on self-reported data. Future research should employ larger samples across diverse contexts, conduct longitudinal studies tracking supervision effects on teacher development trajectories and student achievement over multiple years, incorporate more objective outcome measures, and examine broader systemic factors shaping supervision implementation. Additionally, experimental designs systematically testing specific supervision components would strengthen causal conclusions about which elements most effectively drive pedagogical improvement.

REFERENCES

Arsini, Y., Yoana, L., & Prastami, Y. (2023). Peranan Guru Sebagai Model dalam Pembentukan Karakter Peserta Didik. *MUDABBIR Journal Research and Education Studies*, *3*(2), 27-35. https://doi.org/10.56832/mudabbir.v3i2.368

Baxter, P., & Jack, S. (2008). Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report, 13*(4), 544–559. https://doi.org/10.46743/2160-3715/2008.1573

Blömeke, S., Gustafsson, J. E., & Shavelson, R. J. (2016). Beyond dichotomies: Competence viewed as a continuum. *Zeitschrift für Psychologie, 223*(1), 3–13. https://doi.org/10.1027/2151-2604/a000194

Bold, T., Filmer, D., Martin, G., Molina, E., Stacy, B., Rockmore, C., ... & Wane, W. (2017). Enrollment without learning: Teacher effort, knowledge, and skill in primary schools in Africa. *Journal of Economic Perspectives*, *31*(4), 185-204. https://doi.org/10.1257/jep.31.4.185

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Cahyana, C., & Agustin, M. (2024). Kompetensi pedagogik guru kelas: perencanaan, penerapan dan evaluasi dalam pembelajaran. *Edukatif: Jurnal Ilmu Pendidikan*, *6*(1), 844-851. https://doi.org/10.31004/edukatif.v6i1.5962

Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., & Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum, 41*(5), 545–547. https://doi.org/10.1188/14.ONF.545-547

Creemers, B. P. M., & Kyriakides, L. (2008). *The dynamics of educational effectiveness: A contribution to policy, practice and theory in contemporary schools*. Routledge.

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute. https://doi.org/10.54300/122.311

Day, C., & Gu, Q. (2010). *The new lives of teachers*. Routledge.

Dudley, P. (2014). *Lesson study: A handbook*. http://lessonstudy.co.uk/lesson-study-a-handbook/

Edmondson, A. C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an interpersonal construct. *Annual Review of Organizational Psychology and Organizational Behavior, 1*, 23–43. https://doi.org/10.1146/annurev-orgpsych-031413-091305

Ehren, M. C. M., Altrichter, H., McNamara, G., & O'Hara, J. (2013). Impact of school inspections on improvement of schools—Describing assumptions on causal mechanisms in six European countries. *Educational Assessment, Evaluation and Accountability, 25*(1), 3–43. https://doi.org/10.1007/s11092-012-9156-4

Fakhruddin, A. M., Annisa, Putri, L. O., & Sudirman, P. R. A. T. (2023). Kompetensi Seorang Guru dalam Mengajar. *Journal on Education, 5*(2), 3418–3425. https://doi.org/10.31004/joe.v5i2.1021

Gaol, N. T. L., & Siburian, P. (2018). Peran Kepala Sekolah Dalam Meningkatkan Kinerja Guru. *Kelola: Jurnal Manajemen Pendidikan, 5*(1), 66–73. https://doi.org/10.24246/j.jk.2018.v5.i1.p66-73

Gess-Newsome, J., Taylor, J. A., Carlson, J., Gardner, A. L., Wilson, C. D., & Stuhlsatz, M. A. M. (2019). Teacher pedagogical content knowledge, practice, and student achievement. *International Journal of Science Education, 41*(7), 944–963. https://doi.org/10.1080/09500693.2016.1265158

Glickman, C. D., Gordon, S. P., & Ross-Gordon, J. M. (2007). *Supervision and instructional leadership: A developmental approach* (7th ed.). Pearson.

Hallinger, P., & Wang, W. C. (2015). *Assessing instructional leadership with the principal instructional management rating scale*. Springer.

Hannum, I. (2021). Supervisi Akademik Sebagai Upaya Untuk Meningkatkan Kinerja Guru Pendidikan Agama Islam Dan Budi Pekerti (PAIBP) Sekolah Dasar Di Kota Binjai. *Jurnal Analisa Pemikiran Insan Cendikia (Jurnal APIC), 4*(1), 52-58. https://doi.org/10.24114/esjpgsd.v10i4.23706

Harris, A. (2013). Distributed leadership: Friend or foe? *Educational Management Administration & Leadership, 41*(5), 545–554. https://doi.org/10.1177/1741143213497635

Hoque, K. E., Kenayathulla, H. B., Subramaniam, M. V., & Islam, R. (2020). Relationships between supervision and teachers' performance and attitude in secondary schools in Malaysia. *SAGE Open, 10*(2), 1–10. https://doi.org/10.1177/2158244020925501

Horn, I. S., & Kane, B. D. (2015). Opportunities for professional learning in mathematics teacher workgroup conversations: Relationships to instructional expertise. *Journal of the Learning Sciences, 24*(3), 373–418. https://doi.org/10.1080/10508406.2015.1034865

Houston, D. (2007). TQM and higher education: A critical systems perspective on fitness for purpose. *Quality in Higher Education, 13*(1), 3–17. https://doi.org/10.1080/13538320701272672

König, J., Doll, J., Buchholtz, N., Förster, S., Kaspar, K., Rühl, A. M., Strauß, S., Bremerich-Vos, A., Fladung, I., & Kaiser, G. (2020). General pedagogical knowledge, pedagogical adaptivity in written lesson plans, and instructional practice among preservice teachers. *Journal of Curriculum Studies, 50*(6), 839–851. https://doi.org/10.1080/00220272.2020.1752804

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE Publications.

Little, J. W. (2002). Locating learning in teachers' communities of practice: Opening up problems of analysis in records of everyday work. *Teaching and Teacher Education, 18*(8), 917–946. https://doi.org/10.1016/S0742-051X(02)00052-5

Mardalena, M., Arafat, Y., & Fitria, H. (2020). Pengaruh Supervisi Akademik dan Kompetensi Profesional Guru terhadap Kinerja Guru di Sekolah Menengah Atas Negeri di Kecamatan Tanjung Raja. *Jurnal Intelektualita: Keislaman, Sosial Dan Sains, 9*(1), 103-114. https://doi.org/10.19109/intelektualita.v9i1.5582

Mariscal, L. L., Albarracin, M. R., Mobo, F. D., & Cutillas, A. L. (2023). Pedagogical Competence towards Technology-Driven Instruction on Basic Education. *Online Submission, 4*(5), 1567-1580. http://dx.doi.org/10.11594/ijmaber.04.05.18

Merriam, S. B., & Tisdell, E. J. (2016). *Qualitative research: A guide to design and implementation* (4th ed.). Jossey-Bass.

Muhsin, Sudadi, Mahmud, M. E., & Muadin, A. (2023). Supervisi Akademik untuk Meningkatkan Mutu Pembelajaran dan Pengembangan Budaya Mutu. *Journal of Education Research, 4*(4), 2393–2398. https://doi.org/10.37985/jer.v4i4.569

Murdock, J., Kamischke, E., Seeley, C., & Whitenack, J. W. (2020). *Effective planning for powerful teaching*. NCTM.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods, 16*, 1–13. https://doi.org/10.1177/1609406917733847

O'Neill, O. (2013). Intelligent accountability in education. *Oxford Review of Education, 39*(1), 4–16. https://doi.org/10.1080/03054985.2013.764761

Osakwe, R. N. (2014). Classroom management: A tool for achieving quality secondary school education in Nigeria. *International Journal of Education, 6*(2), 58. https://doi.org/10.5296/ije.v6i2.5616

Ozen, H., & Yıldırım, R. (2020). Teacher perspectives on classroom management. *International Journal of Contemporary Educational Research, 7*(1), 99-113. https://doi.org/10.33200/ijcer.645818

Popova, A., Evans, D. K., Breeding, M. E., & Arancibia, V. (2022). Teacher professional development around the world: The gap between evidence and practice. *The World Bank Research Observer, 37*(1), 107–136. https://doi.org/10.1093/wbro/lkab006

Sallis, E. (2014). *Total quality management in education* (3rd ed.). Routledge.

Sanjani, M. A. (2020). Tugas Dan Peranan Guru Dalam Proses Peningkatan Belajar Mengajar. *Jurnal Serunai Ilmu Pendidikan, 6*(1), 35–42. https://doi.org/10.37755/sjip.v6i1.287

Scheerens, J. (2016). *Educational effectiveness and ineffectiveness: A critical review of the knowledge base*. Springer.

Selwyn, N. (2016). *Is technology good for education?* Polity Press.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information, 22*(2), 63–75. https://doi.org/10.3233/EFI-2004-22201

Sihaloho, B. (2022). School principal leadership in realizing independent learning at SMK Negeri 1 Patumbak. *Jurnal Guru Kita PGSD, 6*(2), 35–41. https://doi.org/10.24114/jgk.v6i2.32547

Skaalvik, E. M., & Skaalvik, S. (2017). Teacher stress and teacher self-efficacy: Relations and consequences. In T. McIntyre, S. McIntyre, & D. Francis (Eds.), *Educator stress* (pp. 101–125). Springer. https://doi.org/10.1007/978-3-319-53053-6_5

Tondeur, J., van Braak, J., Ertmer, P. A., & Ottenbreit-Leftwich, A. (2017). Understanding the relationship between teachers' pedagogical beliefs and technology use in education: A systematic review of qualitative evidence. *Educational Technology Research and Development, 65*(3), 555–575. https://doi.org/10.1007/s11423-016-9481-2

UNESCO. (2014). *Teaching and learning: Achieving quality for all*. UNESCO Publishing.

Wahidah, A., Amrulloh, A., & Hakim, D. (2024). Peran supervisi akademik kepala sekolah dalam optimalisasi implementasi kurikulum merdeka di sekolah. *Nidhomiyyah: Jurnal Manajemen Pendidikan Islam, 5*(2), 138-154. https://doi.org/10.38073/nidhomiyyah.v5i2.1851

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

World Bank. (2024). *Closing the learning data gap: The state of education data and assessment systems*. World Bank.

Yestiani, D. K., & Zahwa, N. (2020). Peran Guru dalam Pembelajaran pada Siswa Sekolah Dasar. *Fondatia: Jurnal Pendidikan Dasar, 4*(1), 41–47. https://doi.org/10.36088/fondatia.v4i1.515

Yin, R. K. (2014). *Case study research: Design and methods* (5th ed.). SAGE Publications.