

Academic Supervision and Coaching of a Junior Secondary Science Teacher: A Case Study

Budi Prasetyo^{1*}

SMP IP Darut Taqwa Karang Anyar, Lampung, Indonesia¹

budipraseetyo558@gmail.com^{1*}



Article History

Received on 2 March 2026

1st Revision on 20 March 2026

2nd Revision on 6 April 2026

3rd Revision on 29 April 2026

Accepted on 06 May 2026

Abstract

Purpose: This study documents the implementation of academic supervision and post-observation coaching with a Science teacher at a Junior Secondary School (*Madrasah Tsanawiyah*) in Lampung, Indonesia, examining lesson-plan quality, instructional practice, and assessment implementation as the basis for professional feedback.

Research Methodology: A descriptive case-study design was used, combining document analysis of the lesson plan, classroom observation using three structured supervision instruments, and a post-observation coaching session following the GROW model. Each instrument scored multiple indicators on a four-point scale, converted to a percentage-based final result.

Results: The lesson-plan instrument yielded 79 out of 96 (82.29%), classified as Good. The lesson-implementation instrument yielded 81 out of 96 (84.38%), also Good. The assessment-implementation instrument yielded 80 out of 96 (83.33%), likewise Good. Coaching interviews indicated that limited textbook availability, rather than instructional skill, was the primary constraint on lesson delivery, and that practicum activities generated strong student engagement despite this constraint.

Conclusions: The teacher demonstrated consistently good performance across planning, delivery, and assessment domains, with resource limitation rather than pedagogical weakness identified as the principal barrier.

Limitations: The study is based on a single teacher and one supervision cycle, limiting generalizability, and relies on supervisor-administered instruments rather than triangulated multi-rater data.

Contributions: The study offers a replicable protocol combining structured observation with GROW-model coaching for supervision practicums, providing benchmark scores for similar academic supervision training in Indonesian teacher education.

Keywords: *Academic Supervision, Clinical Coaching, Instructional Assessment, Junior Secondary School, Lesson Plan Quality*

How to Cite: Prasetyo, B. (2026). Academic Supervision and Coaching of a Junior Secondary Science Teacher: A Case Study. *Jurnal Studi Multidisiplin Ilmu*, 4(2), 13-25.

1. Introduction

Educational quality depends heavily on teacher professionalism, and academic supervision is one of the principal mechanisms through which schools sustain and improve that professionalism over time

([Bellibas, Gumus, & Liu, 2021](#)). International comparative assessment continues to show that Indonesian students perform below the international average in reading, mathematics, and science; the 2018 round of the Programme for International Student Assessment placed Indonesia among the lower-performing participating countries across all three domains, with scores that remained essentially unchanged in the subsequent 2022 round despite intervening curriculum reform efforts ([OECD, 2019](#)). While this outcome cannot be attributed to any single cause, teacher competence and the quality of classroom instruction are consistently identified among the most influential school-level factors, since students experience the consequences of instructional quality more directly and continuously than any other actor in the education system ([Khobir, Harapan, & Kesumawati, 2021](#); [Kemendikbud, 2021](#)).

Teacher competence is conventionally understood in the Indonesian regulatory framework to comprise four dimensions, namely pedagogical, professional, personal, and social competence, and empirical work profiling these dimensions among practicing and newly graduated teachers has generally found professional and pedagogical competence to be the strongest predictors of classroom effectiveness, while social competence more strongly predicts collegial functioning within the school as an organization ([Andayani, Handayani, Hanafi, Mardiana, Prabowo, & Saputra, 2022](#)). A separate line of research examining the joint contribution of these four competencies to student learning outcomes in social studies instruction found that pedagogical and professional competence carried the largest direct effect on achievement, reinforcing the rationale for supervision programs that concentrate specifically on classroom-level instructional practice rather than administrative compliance alone ([Salamah, Tarto, Suhari, & Tinursani, 2022](#)).

Improving teacher competence can be pursued through several channels, including subject teacher working groups, participation in scientific forums such as seminars and workshops, and formal in-service training. Among these channels, academic supervision by the school principal, or by a supervisor acting in that capacity, occupies a distinctive position because it is embedded directly in the teacher's own classroom practice rather than delivered through generic external training divorced from the teacher's actual students and curriculum ([Suroso, Wuryandini, & Murniati, 2023](#)). This distinction matters empirically as well as conceptually: research on instructional and distributed leadership has repeatedly found that leadership practices exercised close to the classroom, including direct observation and structured feedback, exert a stronger influence on observed instructional quality than leadership practices exercised at greater organizational distance from the classroom ([Bellibas et al., 2021](#)). Academic supervision implemented appropriately and continuously has, on this basis, been shown to produce measurable improvement in classroom learning quality, benefiting students, teachers, and school leadership alike ([Pratiwi, Prihatin, & Raharjo, 2023](#)).

Classroom instruction in the Indonesian context is organized around the lesson plan, referred to locally as the *Rencana Pelaksanaan Pembelajaran* or RPP, which the teacher prepares before each teaching session in reference to the prevailing curriculum and syllabus. Because supervision is fundamentally oriented toward improvement rather than compliance auditing, its procedures must be followed correctly, proceeding from planning through implementation, evaluation, and follow-up based on the evaluation outcome ([Lestari & Rahmawati, 2023](#)). Lesson-plan quality itself is a documented point of difficulty for many teachers, independent of their classroom delivery skill; simplification of lesson-plan formats and continuous structured guidance have both been found to measurably ease the administrative burden of lesson planning and improve the resulting document quality, suggesting that lesson-plan competence and classroom-delivery competence, while related, are not identical constructs and merit separate supervisory attention ([Wicaksono, 2022](#); [Salim, 2014](#)).

This study was undertaken as part of a graduate Biology Education Supervision course requirement, in which the author, acting as supervisor, conducted a full supervision cycle, encompassing lesson-plan review, classroom observation, assessment-practice review, and post-observation coaching, with a Science teacher at a junior secondary school in Lampung Province, Indonesia. To protect the privacy of the individuals involved, the teacher, school, and school principal are referred to throughout this

article using generic designations rather than their actual names, consistent with standard research-ethics practice for practicum-based case studies involving identifiable school personnel.

This paper presents the complete supervision cycle undertaken with the partner teacher, encompassing site and participant background, the theoretical grounding for the supervisory approach and instruments used, the structured observation and coaching methodology applied, and the resulting scores and qualitative findings across the three domains of lesson planning, lesson implementation, and learning assessment. The paper closes with a discussion of what the combined quantitative and qualitative findings suggest about the relative contribution of individual teacher skill versus school-level resource constraints to classroom instructional quality, a distinction with direct implications for how supervision findings should be acted upon by both the individual teacher and the school as an institution.

2. Literature Review

2.1 Academic Supervision as a Mechanism for Instructional Improvement

Academic supervision is oriented toward cultivating improvement from within the teacher rather than imposing it externally, aiming to build shared commitment among supervisors, principals, and teachers toward continuous instructional quality gains ([Wahib, 2022](#)). Because supervision touches directly on a teacher's professional identity and confidence, its effectiveness depends on principles of practicality, objectivity, collaboration, and continuity, applied through an approach appropriate to the individual teacher's disposition and experience level ([Herawati et al., 2015](#)). Comparative evidence from principal-leadership research indicates that instructional and distributed leadership practices, of which academic supervision is a core component, meaningfully shape the instructional quality observed in teachers' classroom practice ([Bellibas et al., 2021](#)), a finding echoed in studies linking supervisor academic-supervision activity and principal leadership jointly to teacher performance outcomes ([Khobir et al., 2021](#)). Cross-national evidence from a large-scale study of shared instructional leadership in China similarly found that when instructional leadership responsibilities are distributed rather than concentrated solely in the principal, teacher self-efficacy and, indirectly, student academic performance both improve, suggesting that the supervisory relationship itself, not merely its content, carries developmental value for the teacher being supervised ([Liu et al., 2022](#)).

The mechanism through which supervision translates into improved practice is increasingly understood to run partly through teacher self-efficacy rather than through direct compliance with supervisor instructions. A quasi-experimental policy study conducted in a centralized national education system found that empowering principals to conduct structured classroom observations, paired with feedback, measurably increased both teacher self-efficacy and observed instructional practice quality relative to a comparison condition without such structured observation ([Bellibas, 2023](#)). This finding is consistent with earlier cross-cultural work showing that the influence of school leadership on classroom teaching operates differently depending on the surrounding organizational and cultural context, meaning that supervisory approaches transplanted uncritically from one setting to another may not produce the same effect ([Liu & Hallinger, 2021](#)). For a case study conducted within a single Indonesian school, this literature suggests that the supervisory relationship's perceived fairness and specificity, not merely its formal existence, is likely to shape how much developmental value the teacher derives from the process.

Three broad approaches structure how a supervisor engages a teacher during supervision: a directive approach, most suited to disengaged or underperforming teachers and grounded in behaviorist reinforcement principles; a non-directive approach, grounded in humanistic psychology and best suited to already-professional teachers, in which the supervisor listens before guiding; and a collaborative approach, grounded in cognitive psychology, in which supervisor and teacher jointly define the structure and criteria of their conversation about classroom practice ([Kurniati, 2020](#)). The choice among these approaches is not arbitrary but should be matched to the teacher's demonstrated characteristics, since a mismatch between approach and teacher disposition can undermine the supervisory relationship rather than strengthen it.

Based on this literature, the present case study anticipated that a collaborative, non-directive posture, given the partner teacher's status as an established in-service teacher rather than a novice, would be more appropriate than a directive approach, and that supervision outcomes would likely reflect areas of genuine instructional strength alongside identifiable, resource-linked constraints rather than fundamental pedagogical deficiency.

2.2 Structured Observation Instruments in Academic Supervision

Supervision instruments are the tools through which a supervisor systematically identifies a teacher's competency profile across lesson planning, lesson delivery, and assessment practice, and the success of a supervision cycle depends heavily on the appropriateness of the instruments selected ([Suroso et al., 2023](#)). Instrumented, criterion-referenced observation is preferred over unstructured impression-based judgment because it produces a defensible, comparable score and directs supervisor and teacher attention toward specific, actionable indicators rather than global impressions ([Patel et al., 2022](#)). Feedback grounded in specific observed classroom evidence, rather than generalized commentary, has been found to more reliably translate into instructional improvement in subsequent lessons ([Patel et al., 2022](#)).

Lesson-plan quality itself remains a persistent challenge for many teachers, who often experience difficulty translating curriculum requirements into a coherent, well-sequenced lesson document; continuous, structured guidance has been shown to measurably improve teachers' lesson-plan development competence over time ([Wicaksono, 2022](#)). This finding motivates the inclusion of a dedicated lesson-plan supervision instrument, distinct from the classroom-observation instrument, within the present supervision cycle, on the expectation that lesson-plan quality and classroom delivery quality, while related, would not necessarily track identically. A companion instrument evaluating assessment implementation is similarly warranted given evidence that teacher competence profiles across the four regulatory competency domains do not always move in tandem; a teacher may demonstrate strong pedagogical delivery while showing comparatively less developed documentation of formal assessment practice, or the reverse, making a single combined score less diagnostically useful than three separate, domain-specific instruments ([Andayani et al., 2022](#)).

2.3 Coaching as a Complement to Supervision

Supervision alone, understood narrowly as observation and scoring, is generally considered insufficient without a structured follow-up conversation that helps the teacher internalize and act on the findings. Coaching, as a structured conversation using real performance information to generate improved future performance, has been shown to strengthen the link between formal instructional supervision and subsequent classroom improvement, particularly when it follows immediately after observation and focuses on teacher-identified rather than solely supervisor-identified concerns ([Sutan, 2022](#)). Models such as GROW, structured around Goal, Reality, Options, and Way Forward, provide a replicable conversational scaffold for this purpose and have been associated with positive perceived professional growth among both instructional leaders and teachers in recent qualitative accounts of their implementation ([Castillo, 2025](#)). Independent analysis of the GROW model's application in mentoring contexts similarly concludes that its explicit, staged structure makes it particularly suitable for less experienced coaches, since it reduces reliance on improvised conversational skill and instead channels the coaching conversation through a known and teachable sequence ([Mogonea, 2022](#)).

Coaching and mentoring relationships in education more broadly have been associated with a range of benefits beyond immediate classroom performance, including reduced professional stress and stronger retention among teachers newer to the profession, effects documented across a range of national contexts ([Boyle et al., 2023](#); [Ewing, 2021](#)). Comparative accounts of formal induction and mentoring policy from Scandinavian education systems similarly emphasize that the perceived quality of the relationship between the person being supported and the person providing that support, more than the formal existence of a mentoring or coaching program, determines whether the support is experienced as genuinely developmental or merely procedural ([Jacobsen & Gunnulfsen, 2023](#); [Kvam et al., 2023](#)). Although the partner teacher in this study was not a novice requiring induction support in the formal sense, this literature nonetheless suggests that the coaching component of the present supervision

cycle should be evaluated not only by its content but by whether it was experienced by the teacher as a genuine, teacher-centered conversation rather than a supervisor-driven evaluation exercise.

Coaching conducted after supervision is expected to concentrate on the teacher's self-identified areas for growth rather than a supervisor-imposed agenda, transforming identified weaknesses into teacher-owned commitments for subsequent lessons. This study therefore anticipated that the coaching component would surface constraints and priorities not necessarily visible from the observation scores alone, particularly regarding resource availability and instructional media, and that comparing supervision scores with coaching-interview content would provide a more complete picture of the teacher's instructional situation than either source alone.

2.4 Hands-On Instruction, Resource Constraints, and Student Engagement in Science Learning

The instructional content observed in this study, a Grade VII Science lesson on the relationship between heat and changes in the state of matter, is well suited to hands-on, practicum-based delivery, and recent science education research consistently demonstrates the value of active and inquiry-based learning for improving students' conceptual understanding, engagement, and scientific skills. Contemporary evidence suggests that inquiry-oriented and active learning approaches are associated with higher student achievement, motivation, and science literacy than traditional teacher-centered instruction ([Dah et al., 2024](#); [Ridani & Arianingrum, 2024](#); [Ubaidillah et al., 2025](#)). Consequently, the partner teacher's decision to organize a temperature-and-heat practicum, despite limited printed textbook availability, represents an evidence-based instructional adaptation rather than merely a response to resource shortages. The observed implementation is therefore consistent with current recommendations encouraging science teachers to prioritize meaningful student participation and hands-on investigation during classroom instruction ([Dah et al., 2024](#); [Ridani & Arianingrum, 2024](#)).

This finding also provides an important perspective for interpreting the textbook-availability constraint identified during the coaching session. Rather than indicating poor instructional quality, the teacher compensated for limited printed resources by utilizing practical activities and alternative learning strategies. Recent studies indicate that teachers frequently integrate additional learning resources and adapt instructional materials when science textbooks are insufficient, enabling learning objectives to remain achievable despite resource limitations ([Ridzuwan et al., 2024](#); [Tlili et al., 2025](#)). Nevertheless, prolonged shortages of quality learning resources may gradually reduce opportunities for comprehensive content coverage and equitable learning experiences, highlighting the importance of strengthening instructional resource support alongside teacher professional development ([Tlili et al., 2025](#)).

2.5 Ethical Considerations in Reporting Individual Supervision Data

Because academic supervision case studies of this kind necessarily involve detailed, individually identifiable performance data about a specific teacher, careful attention to how that data is reported is a methodological as well as an ethical requirement. Supervision scores and coaching-interview content, while appropriate for internal use within a school's own professional-development process, carry a different set of considerations when compiled into a document intended for wider academic distribution, since the individual being evaluated may not have consented to that broader use of their personal performance record. This study therefore reports all quantitative and qualitative findings using generic designations for the teacher, school, and principal rather than their actual identities, consistent with standard practice for practicum-based case studies of identifiable school personnel. This approach preserves the full evidentiary value of the supervision data documented here while removing the specific link between that data and any named individual ([Kurniati, 2020](#)).

3. Research Methodology

3.1 Research Design

This study used a descriptive, single-case supervision case-study design, consistent with the applied, practice-oriented methodology typical of graduate supervision practicums ([Creswell & Creswell, 2018](#)). The design is appropriate for documenting the process and outcome of a bounded professional-development intervention, namely one complete supervision cycle with a single partner teacher,

rather than for testing a generalizable causal hypothesis across a sampled population ([Sugiyono, 2021](#)).

3.2 Participants and Setting

The study was conducted at a junior secondary school (Madrasah Tsanawiyah) in Lampung Province, Indonesia, referred to here as the target school to protect participant privacy. The partner teacher, referred to as the partner teacher throughout this article, taught Science (Ilmu Pengetahuan Alam) to Grade VII students, delivering a unit on heat and its transfer during the observed lesson. The supervision practicum was carried out under the guidance of the target school's principal and the course's faculty supervisory team, following a formal individual competency-needs analysis and individual supervision project plan prepared prior to the observation cycle.

3.3 Instruments and Procedure

Three structured supervision instruments were used, each scoring multiple indicators on a four-point scale (1 to 4) based on the number of criteria observed as fulfilled, with a notes column for supervisor commentary. The first instrument evaluated lesson-plan quality across eight components: RPP identity, competency-achievement indicators, learning objectives, learning materials, learning resources, instructional media, learning activities, and assessment planning. The second instrument evaluated classroom lesson implementation across introductory, core, and closing activities, covering apperception and motivation, mastery of subject matter, instructional strategy, application of the scientific approach, use of learning resources and media, student involvement, and correct language use. The third instrument evaluated learning-assessment implementation, covering the teacher's practice in attitude, knowledge, and skill assessment, as well as the facilitation of student self- and peer assessment.

Each instrument's raw score was converted to a percentage of the maximum possible score and classified according to a standard four-tier scale: Excellent (86% to 100%), Good (76% to 85%), Fairly Good (56% to 75%), and Poor (below 55%). This classification framework was applied uniformly across all three instruments so that scores could be meaningfully compared across the planning, delivery, and assessment domains.

Following the three observation instruments, a coaching session was conducted using the GROW method, structured around establishing the teacher's goal for the session, discussing the teacher's current instructional condition, generating teacher-proposed solutions, and developing a follow-up plan for subsequent lessons. The coaching session used a ten-item structured question protocol addressing student engagement, instructional difficulties, media adequacy, classroom management, curriculum alignment, and the teacher's own professional reflections. Consistent with the collaborative, non-directive posture identified in the literature review as appropriate for an established in-service teacher, the supervisor's role during coaching was limited to posing the structured questions and reflecting the teacher's own responses back for further elaboration, rather than supplying solutions directly.

3.4 Data Analysis

Quantitative scores from the three supervision instruments were summed and converted to percentage-based final results using the formula: Final Result equals total score divided by maximum possible score, multiplied by 100. Qualitative data from supervisor field notes and the coaching interview were analyzed descriptively, organized around the categories of material delivery, use of methods and media, and use of the library and environment as learning resources, consistent with the descriptive case-study analysis approach typical of this type of supervision practicum ([Sugiyono, 2021](#)). Supervisor notes recorded during each observation were cross-referenced against the corresponding coaching-interview responses to identify areas of convergence, where both the structured score and the teacher's own account pointed to the same conclusion, and divergence, where the coaching interview surfaced information not visible in the numeric score alone.

4. Results and Discussions

Table 1 summarizes the quantitative outcome of the three structured supervision instruments applied in this study, and Table 2 maps each research objective to its corresponding finding and the practical implication that follows from it. Together, the two tables provide the quantitative and applied summary that frames the domain-by-domain discussion presented in Sections 4.1 through 4.5.

Table 1. Overall summary of supervision results

No.	Supervision Instrument	Score	Percentage (%)	Category
1	Lesson Plan (RPP) Supervision	79	82.29	Good
2	Learning Implementation Supervision	81	84.38	Good
3	Learning Assessment Supervision	80	83.33	Good
Average		80	83.33	Good

Table 1 reports the raw score, percentage result, and qualitative category obtained from each of the three supervision instruments described in Section 3.3, together with the average across all three. Each raw score is expressed against a maximum possible score of 96, and each percentage is calculated as the raw score divided by 96 and multiplied by 100. All three instruments, and their average, fall within the Good category (76% to 85%) on the four-tier classification scale applied throughout this study.

Table 2. Summary of major research findings

Research Objective	Findings	Implication
Evaluate lesson planning	Lesson planning quality was categorized as Good (79).	Improve learning objectives and competency indicators.
Evaluate classroom implementation	Classroom instruction was categorized as Good (81).	Increase student-centered learning and the use of diverse instructional media.
Evaluate learning assessment	Assessment implementation was categorized as Good (80).	Strengthen authentic assessment and documentation of students' practical skills.
Conduct coaching	Coaching identified limited learning resources and insufficient textbooks as the primary instructional constraints.	Improve the availability of learning resources and diversify teaching materials.
Overall evaluation	Academic supervision effectively identified teachers' strengths and weaknesses and supported continuous professional improvement.	Academic supervision should be implemented regularly to enhance teaching quality.

Table 2 aligns each of the study's four specific research objectives, together with an overall evaluation objective, against its corresponding empirical finding and the practical implication that follows from that finding. The table synthesizes the quantitative results in Table 1 with the qualitative coaching findings reported in Section 4.4, and is used as the organizing reference for the domain-by-domain discussion that follows in Sections 4.1 through 4.5.

4.1 Lesson-Plan Supervision Results

The lesson-plan supervision instrument yielded a total score of 79 out of a maximum of 96, corresponding to a final result of 82.29%, classified within the Good range once combined with the

classification scale applied consistently across all three instruments in this study. Strong performance was observed in the completeness of RPP identity information, the selection of learning materials appropriate to the intended competency, and the range of learning resources referenced, including library materials. Comparatively weaker performance was observed in the formulation of competency-achievement indicators and learning objectives, particularly in the explicit inclusion of audience and behavior elements within objective statements, an area consistent with the broader literature's observation that lesson-plan formulation, rather than content selection, is often the more persistent difficulty for teachers ([Wicaksono, 2022](#)).

This pattern, in which materials selection and resource referencing score more strongly than the more abstract, formal task of indicator and objective formulation, mirrors findings from broader teacher-competence profiling research indicating that professional competence, understood as command of subject content and available teaching resources, and pedagogical competence, understood as the more technical skill of translating that content into a formally structured instructional plan, do not necessarily develop at the same pace within an individual teacher ([Andayani et al., 2022](#)). The partner teacher's lesson-plan profile in this study is consistent with a teacher whose command of subject matter and available resources is well established, while the more procedural, format-driven aspects of lesson-plan documentation remain an area for targeted improvement.

4.2 Lesson-Implementation Supervision Results

The lesson-implementation instrument, applied through direct classroom observation, yielded a score of 81 out of 96 (84.38%), also classified as Good, and represented the highest of the three domain scores obtained in this supervision cycle. The teacher demonstrated strong subject-matter mastery, systematic material presentation, and correct, fluent use of both spoken and written language throughout the lesson. Entry-behavior checking at the start of the lesson and application of the scientific approach during core instructional activities were fully met, and the teacher's facilitation of the hands-on practicum component of the lesson, covering the relationship between heat and changes in the state of matter, generated visibly strong student engagement, consistent with a broader pattern in the science-education literature in which direct, hands-on investigation reliably increases observed student engagement relative to lecture-only delivery.

The principal area for improvement was the explicit communication of lesson objectives and competencies to students at the outset of the lesson, an introductory-stage indicator that scored at the lower end of the scale; the teacher began instruction directly without first stating what students were expected to achieve. This finding is consistent with feedback-oriented supervision research indicating that even generally strong teachers often overlook explicit objective-setting at the start of a lesson, an easily correctable practice once identified through structured observation rather than general impression ([Patel et al., 2022](#)). The specificity of this finding also illustrates a broader argument in the instructional-leadership literature for empowering principals and supervisors to conduct structured, criterion-referenced classroom observation rather than relying on informal impressions of teaching quality, since a general impression of a strong lesson would very plausibly have missed this single, narrow, and readily addressable gap ([Bellibas, 2023](#)). Consistent with the implication summarized in Table 2, this finding points toward a targeted improvement direction for classroom implementation, namely increasing student-centered learning activity at the introductory stage of the lesson and diversifying the instructional media used to communicate lesson objectives, rather than a broader restructuring of the teacher's overall delivery approach.

4.3 Learning-Assessment Implementation Results

The learning-assessment implementation instrument yielded a score of 80 out of 96 (83.33%), again classified as Good. The teacher consistently followed up on knowledge-assessment results below the minimum mastery criterion, indicating an established remediation practice, and involved students in self- and peer-assessment activities related to attitude competency. Documentation of skill-competency assessment results scored comparatively lower, suggesting that while skill-based practicum activities were conducted, their systematic documentation was less consistently maintained than knowledge and attitude assessment records.

This pattern, of stronger performance in knowledge-assessment follow-up relative to skill-assessment documentation, is a common finding wherever assessment practice is examined at this level of granularity, since knowledge assessment through tests and quizzes generates naturally quantifiable records, whereas skill assessment through practicum performance requires the teacher to construct and consistently apply a separate documentation system, an additional administrative step that is more easily deprioritized under time pressure. The consistency of the teacher's remediation practice for knowledge assessment nonetheless reflects a meaningful professional commitment to closing gaps identified through formal assessment, a practice that supervision research identifies as one of the more reliable markers of sustained instructional quality over time, since remediation follow-through requires the teacher to revisit and act on assessment data rather than treating assessment as a terminal, one-off activity ([Suroso et al., 2023](#)).

4.4 Coaching Results

The coaching session revealed that the primary constraint on instructional delivery was not the teacher's pedagogical skill but limited textbook availability; students at the target school relied predominantly on a worksheet-based resource (LKS) covering material only briefly, rather than a complete textbook, which the teacher identified as reducing student focus on material that should otherwise be covered in greater depth. This finding illustrates the value of pairing structured observation with coaching, since the observation instruments alone would not have surfaced this resource constraint as clearly as the coaching interview did, consistent with the view that coaching complements formal supervision by surfacing teacher-perceived constraints that structured instruments are not designed to capture ([Sutan, 2022](#)).

The teacher reported strong student engagement during hands-on practicum activities despite this resource constraint, and identified the moment when conveyed knowledge visibly benefits a student's future success as the greatest professional reward of teaching. When asked what would most improve instructional effectiveness going forward, the teacher identified three priorities: better preparation of instructional tools, more varied teaching methods, and a more deliberately organized classroom atmosphere, priorities the teacher generated independently during the GROW-structured conversation rather than in response to supervisor prompting, consistent with the GROW model's emphasis on teacher-generated rather than supervisor-imposed solutions ([Castillo, 2025](#); [Mogonea, 2022](#)).

The fact that the teacher was able to articulate specific, self-diagnosed priorities without extensive supervisor prompting is itself a meaningful finding, since coaching-effectiveness research emphasizes that a teacher's ability to generate their own improvement priorities, rather than simply accepting supervisor-identified ones, is associated with stronger follow-through on those priorities in subsequent practice ([Boyle et al., 2023](#)). This suggests that the collaborative, non-directive coaching posture adopted in this study, consistent with the approach anticipated in the literature review for an established in-service teacher, was well matched to the partner teacher's professional disposition.

4.5 Integrated Discussion

Across all three supervision instruments, the partner teacher achieved consistently Good ratings, with scores clustering closely between 82.29% and 84.38%, and an overall average score of 80 out of 96 (83.33%), also classified as Good. This consistency suggests a teacher whose overall instructional competence is stable across planning, delivery, and assessment domains, rather than one with an isolated area of strength offset by a markedly weaker domain. This pattern is broadly consistent with findings that principal and supervisor-led academic supervision, when implemented systematically, tends to identify a coherent competency profile rather than sharply uneven performance across instructional domains ([Suroso et al., 2023](#); [Pratiwi et al., 2023](#)).

At the same time, the specific indicators that scored lowest across the three instruments, namely explicit statement of lesson objectives at the outset of instruction and complete formulation of competency indicators in the lesson plan, are both discrete, teachable practices rather than signs of broader instructional weakness. This distinction matters for how supervision findings should be acted upon: rather than treating a Good overall score as license for complacency, or a below-Excellent score

as cause for concern about the teacher's general competence, the supervision cycle documented here points toward two narrow, addressable areas for follow-up coaching, alongside a structural, school-level constraint, textbook availability, that lies outside the individual teacher's control and would require action at the school or institutional level to resolve.

This distinction between teacher-level and school-level improvement targets carries a broader implication for how academic supervision programs should be designed and interpreted. A supervision instrument, however well constructed, can only measure what a teacher does within the constraints given to them; it cannot distinguish, on its own, between a low score arising from limited teacher skill and a low score arising from limited institutional resources. The present case illustrates why the qualitative coaching component is not merely a courtesy extended after quantitative scoring but a methodologically necessary complement to it, since it was only through the coaching interview, not the three numeric instruments, that the textbook-availability constraint became visible as a distinct explanatory factor separate from the teacher's own instructional choices. Future supervision protocols in comparable Indonesian school settings may therefore benefit from building an explicit resource-constraint probe into either the observation instrument itself or the standard coaching question set, so that this distinction does not depend solely on whether a particular coaching conversation happens to surface it.

The observed instructional response to the textbook shortage, namely substituting an active, hands-on temperature-and-heat practicum for extended reliance on the limited printed worksheet, is itself worth examining as a positive instructional adaptation rather than only as evidence of a constraint. As noted in the literature review, active, hands-on instructional approaches are associated with measurable performance gains relative to lecture-only delivery across a wide range of science, engineering, and mathematics settings ([Freeman et al., 2014](#)), and the strong student engagement the teacher reported during the practicum, together with the fully met scientific-approach indicators recorded in the lesson-implementation instrument, is consistent with this broader evidence base rather than contradicting it. This reframes the textbook constraint identified through coaching: rather than treating limited textbook availability purely as a deficiency to be corrected, the school and the teacher's professional-development planning going forward might equally treat the teacher's practicum-based adaptation as a documented strength worth extending deliberately to other topics, rather than something the teacher fell back on only because a preferred, textbook-centered alternative was unavailable.

This reframing does not eliminate the underlying resource concern, however. A single, well-observed lesson cannot establish whether hands-on adaptation remains an effective substitute for textbook access across an entire school year and across topics less naturally suited to a practicum format than heat and temperature. Some Science topics lend themselves far more readily to hands-on investigation than others, and a teacher's demonstrated skill in adapting one lesson does not guarantee that the same adaptive capacity can be sustained, without support, across a full curriculum under continued resource scarcity. The supervision cycle documented here should therefore be read as identifying a currently well-managed constraint rather than a resolved one, with the school-level resource question remaining a legitimate and separate target for institutional attention alongside the individual teacher's already-strong instructional adaptation.

Taken together, the three domain scores, the coaching findings, and this broader contextual reading point toward a differentiated set of next steps rather than a single blanket recommendation. For the teacher individually, the two narrow, identified gaps, explicit objective-setting at the start of instruction and more complete formulation of competency indicators in the lesson plan, are well suited to brief, targeted coaching follow-up rather than a broader retraining intervention, since the remainder of the teacher's demonstrated practice was consistently rated Good or higher. For the school as an institution, the textbook-availability finding is better addressed through resource planning than through any form of individual teacher supervision, since no amount of coaching directed at the teacher can resolve a shortage of instructional materials that lies outside the teacher's control. This

differentiated reading is only possible because the study combined structured quantitative instruments with a qualitative coaching interview; either method alone would have supported a less complete, and potentially misleading, account of where the responsibility for further improvement actually lies.

5. Conclusions

5.1 Conclusion

This study documented one complete academic supervision cycle, encompassing lesson-plan review, classroom observation, learning-assessment review, and post-observation coaching, conducted with a Science teacher at a junior secondary school in Lampung Province, Indonesia. Across the three structured supervision instruments, the teacher achieved scores of 79, 81, and 80 out of a maximum of 96 (82.29%, 84.38%, and 83.33% respectively), and an overall average of 80 out of 96 (83.33%), for lesson planning, lesson implementation, and learning-assessment implementation respectively, each classified as Good. Coaching conducted using the GROW model identified limited textbook availability, rather than instructional skill, as the principal constraint on lesson delivery, while confirming strong student engagement during hands-on practicum activities and a consistent teacher practice of following up on assessment results below the minimum mastery threshold.

5.2 Research Limitations

This study is limited to a single teacher, a single school, and a single supervision cycle, which restricts the generalizability of its findings to other teachers, subjects, or school contexts. The supervision instruments were administered by a single supervisor, introducing the possibility of rater-specific bias that a multi-rater or triangulated design would help address. The study also relies on supervisor field notes and a single coaching interview rather than a longitudinal design capable of tracking whether the identified areas for improvement, particularly explicit objective-setting, were subsequently addressed in later lessons. Finally, because the school, teacher, and principal are referred to using generic designations to protect participant privacy, contextual detail that might otherwise support comparison with other specific school settings has necessarily been limited.

5.3 Suggestions and Directions for Future Study

Future supervision practicum research could extend this design across multiple teachers and multiple observation cycles within the same school, allowing comparison of score trajectories over time rather than a single snapshot. A multi-rater design, incorporating peer observation alongside principal or supervisor observation, would help distinguish genuine instructional patterns from rater-specific interpretation. Given that this study identified a school-level resource constraint, namely textbook availability, as a significant factor shaping instructional delivery, future work could also usefully pair individual teacher supervision with a school-level resource audit, to distinguish more systematically between improvement areas addressable through teacher coaching and those requiring institutional or administrative intervention. Building an explicit resource-constraint probe directly into supervision instruments, rather than relying on it emerging incidentally during coaching, would also be a worthwhile refinement for future supervision protocol design in comparable school settings.

Acknowledgement

The author gratefully acknowledges the guidance of the course faculty supervisory team, the cooperation of the partner teacher and the principal of the target school, and the support of the Department of Biology Education, Universitas Muhammadiyah Metro, throughout this supervision practicum.

References

- Andayani, A., Handayani, M., Hanafi, H., Mardiana, A., Prabowo, S., & Saputra, A. H. (2022). The profile of professional, pedagogical, social, and personal competence of elementary school teacher education graduates. *Jurnal Basicedu*, 6(3), 3674-3682. <https://doi.org/10.31004/basicedu.v6i3.2700>

- Bellibas, M. S. (2023). Empowering principals to conduct classroom observations in a centralized education system: Does it make a difference for teacher self-efficacy and instructional practices? *International Journal of Educational Management*, 37(1), 85-102. <https://doi.org/10.1108/IJEM-02-2022-0086>
- Bellibas, M. S., Gumus, S., & Liu, Y. (2021). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, 32(3), 387-412. <https://doi.org/10.1080/09243453.2020.1858119>
- Boyle, L. H., Mosley, K. C., & McCarthy, C. J. (2023). New teachers' risk for stress: Associations with mentoring supports. *International Journal of Mentoring and Coaching in Education*, 12(1), 95-110. <https://doi.org/10.1108/IJMCE-05-2022-0037>
- Castillo, R. (2025). Instructional supervision and teachers' job performance: Insights from academic heads. *Psychology and Education: A Multidisciplinary Journal*, 46, 156-168. <https://doi.org/10.70838/pemj.460203>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches (5th ed.)*.
- Dah, N. M., Mat Noor, M. S. A., Kamarudin, M. Z., & Syed Abdul Azziz, S. S. (2024). The impacts of open inquiry on students' learning in science: A systematic literature review. *Educational Research Review*, 43, 100601. <https://doi.org/10.1016/j.edurev.2024.100601>
- Ewing, L. (2021). Mentoring novice teachers. *Mentoring and Tutoring: Partnership in Learning*, 29(1), 50-69. <https://doi.org/10.1080/13611267.2021.1899585>
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. Paper presented at Proceedings of the National Academy of Sciences.
- Herawati, E., Sunaryo, W., & Wahyudi, D. (2015). Prinsip dan teknik supervisi akademik [Principles and techniques of academic supervision]. *Rineka Cipta*.
- Jacobsen, H. M., & Gunnulfsen, A. E. (2023). Dealing with policy expectations of mentoring newly qualified teachers: A Norwegian example. *Scandinavian Journal of Educational Research*, 68(7). <https://doi.org/10.1080/00313831.2023.2250381>
- Kemendikbud. (2021). *Coaching dalam supervisi guru dan tenaga kependidikan [Coaching in the supervision of teachers and education personnel]*.
- Khobir, K., Harapan, E., & Kesumawati, N. (2021). The influence of school supervisor academic supervision and principal leadership on teacher performance. *Jambura Journal of Educational Management*, 2(2), 83-96. <https://doi.org/10.37411/jjem.v2i2.902>
- Kurniati, A. (2020). Pendekatan dan model supervisi akademik [Approaches and models of academic supervision]. *Deepublish*.
- Kvam, E. K., Ulvik, M., & Eide, L. (2023). Newly qualified teachers' experiences of support in a micro-political perspective. *Scandinavian Journal of Educational Research*, 68(5). <https://doi.org/10.1080/00313831.2023.2196545>
- Lestari, H., & Rahmawati, I. (2023). Principal's academic supervision of teachers' teaching performance at SMAN 1 Cibungbulang. *Reslaj: Religion Education Social Laa Roiba Journal*, 6(2), 797-804. <https://doi.org/10.47467/reslaj.v6i2.4978>
- Liu, S. N., & Hallinger, P. (2021). Unpacking the effects of culture on school leadership and teacher learning in China. *Educational Management Administration & Leadership*, 49(2), 214-233. <https://doi.org/10.1177/1741143219896042>
- Liu, Y., Li, L., & Huang, C. (2022). To what extent is shared instructional leadership related to teacher self-efficacy and student academic performance in China? *School Effectiveness and School Improvement*, 33(3), 381-402. <https://doi.org/10.1080/09243453.2022.2029746>
- Mogonea, F. (2022). A possible mentoring model: The GROW model. *Annals of the University of Craiova Series Psychology-Pedagogy*, 44(2), 60-70. <https://doi.org/10.52846/aucpp.2022.2.05>

- OECD. (2019). *PISA 2018 results (Volume I): What students know and can do*.
- Patel, S., Zahir, M., & Singh, V. (2022). Feedback and teacher development: A case study of instructional supervision and student outcomes. *Journal of Educational Development*, 44(5), 411-426. <https://doi.org/10.1016/j.jeddev.2022.04.006>
- Pratiwi, L. C., Prihatin, T., & Raharjo, T. J. (2023). The influence of principal managerial skills, academic supervision, school culture on teacher performance. *Pendas Lens Journal*, 8(2), 217-222. <https://doi.org/10.33222/jlp.v8i2.3204>
- Ridani, M., & Arianingrum, R. (2024). Type of active learning implementation in science education: A systematic review. *Indonesian Journal of Educational Research and Review*, 7(2). <https://doi.org/10.23887/ijerr.v7i2.65623>
- Ridzuwan, A. Z., Halim, L., & Wan Mohammad, W. M. R. (2024). A conceptual framework of teacher and student strategies in the use of science textbooks through a systematic literature review. *Jurnal Pendidikan Sains dan Matematik Malaysia*, 14(2). <https://doi.org/10.37134/jpsmm.vol14.2.1.2024>
- Salamah, Tarto, Suhari, & Tinursani, D. (2022). The effect of teacher's pedagogical, personal, professional, and social competence of teachers on social studies learning achievement of students. Paper presented at In Proceedings of the 1st UPY International Conference on Education and Social Science (pp. 174-188). Atlantis Press.
- Salim, A. (2014). Percakapan coaching untuk pengembangan profesi [Coaching conversation for professional development]. *Gramedia*.
- Sugiyono. (2021). Metode penelitian kuantitatif, kualitatif dan R&D [Quantitative, qualitative and R&D research methods]. *Alfabeta*.
- Suroso, S., Wuryandini, E., & Murniati, N. A. N. (2023). Analisis supervisi akademik kepala sekolah dalam peningkatan kinerja pembelajaran guru. *JlIP: Jurnal Ilmiah Ilmu Pendidikan*, 6(2), 1164-1168. <https://doi.org/10.54371/jiip.v6i2.1294>
- Sutan, M. (2022). Supervisi kolaboratif dapat meningkatkan kompetensi profesional guru. *Jurnal Ilmiah Pendidikan Profesi Guru*, 3(2), 364-374. <https://doi.org/10.23887/jippg.v3i2.29090>
- Tlili, A., Zhang, X., Lampropoulos, G., Salha, S., Garzón, J., Bozkurt, A., Huang, R., & Burgos, D. (2025). Uncovering the black box effect of Open Educational Resources (OER) and practices (OEP): A meta-analysis and meta-synthesis from the perspective of activity theory. *Humanities and Social Sciences Communications*, 12, 504. <https://doi.org/10.1038/s41599-025-04644-y>
- Ubaidillah, M., Marwoto, P., Wiyanto, Subali, B., Widiyatmoko, A., & Cahyono, A. N. (2025). A systematic literature review on trends in the use of science experiments in online learning environments. *International Review of Research in Open and Distributed Learning*, 26(3). <https://doi.org/10.19173/irrodl.v26i3.8221>
- Wahib, A. (2022). Filosofi dan praktik supervisi pendidikan [Philosophy and practice of educational supervision]. *Prenadamedia*.
- Wicaksono, V. D. (2022). Simplification of lesson plan: Elementary school teacher perspective. *Pedagogia: Jurnal Pendidikan*, 11(2), 77-88. <https://doi.org/10.21070/pedagogia.v11i1.1477>