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Cross-School Collaborative Academic Supervision for Integrated Science and Social Studies Teachers: A Qualitative Case Study in Indonesian Madrasahs

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Abstract

This study examined the implementation of cross-school collaborative academic supervision for Integrated Science and Social Studies teachers in Indonesian madrasahs. Using a qualitative instrumental case study design, the research involved six madrasahs, twelve teachers, six principals serving as cross-school supervisors, and two officials from the Working Group of Madrasah Ibtidaiyah (*Kelompok Kerja Madrasah Ibtidaiyah - KKMI*). Data were collected through semi-structured interviews, non-participant observations, and document analysis, and were analyzed through data condensation, data display, and conclusion verification. The findings showed that the supervision process comprised collective planning, pre-observation conferences, classroom observations, teacher-led reflection, evidence-based feedback, and follow-up planning. Participants perceived the cross-school arrangement as broadening the sources of professional feedback and supporting more participatory reflective dialogue. However, the program did not eliminate the evaluative pressure of supervision, as all teachers reported nervousness during classroom observation. Professional learning needs included interdisciplinary lesson planning, inquiry- and project-oriented instruction, authentic assessment, and the use of instructional resources. Feedback also varied in specificity across madrasah accreditation contexts, indicating the need for differentiated support. The study concludes that cross-school collaborative supervision provides a promising framework for professional learning, but its longer-term contribution depends on sustained mentoring, repeated observation cycles, supervisor preparation, and adequate institutional support.

Keywords: Academic supervision; Cross-school supervision; Integrated science and social studies; Madrasah; Teacher professional learning

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INTRODUCTION

Academic supervision is increasingly understood as a form of professional support rather than a mechanism for administrative control. Its central purpose is to help teachers examine, refine, and improve their instructional practices through observation, dialogue, feedback, and sustained professional learning. This shift reflects a broader movement away from inspection-oriented supervision toward approaches that position teachers as active participants in their own development. Within this perspective, supervisors are expected to function not merely as evaluators but as facilitators who create opportunities for reflection, inquiry, and instructional improvement (Glickman, 1990; Sergiovanni & Starratt, 2002; Glickman et al., 2014).

Despite this conceptual development, the implementation of academic supervision in many school settings remains hierarchical and administratively driven. Supervision is often conducted as a periodic requirement, with attention directed toward lesson plans, documentation, and procedural compliance rather than the complexity of classroom practice.

Such an approach may limit teachers' willingness to discuss instructional difficulties openly, particularly when the supervisor is also their direct institutional superior. Supervisory encounters may therefore produce anxiety, defensiveness, or superficial compliance instead of meaningful professional reflection. Studies conducted in Indonesian school and madrasah contexts similarly indicate that academic supervision is frequently constrained by limited time, inadequate supervisory competence, insufficient follow-up, and an overemphasis on evaluation rather than professional development (Sopaheluwakan et al., 2020; Sianipar et al., 2025; Widodo, 2025).

Collaborative academic supervision offers an alternative to this conventional model. It is grounded in the principle that supervisors and teachers should work as professional partners who jointly identify instructional needs, determine observation priorities, interpret classroom evidence, and formulate improvement plans. Glatthorn (1984) conceptualized collaborative supervision as a structured process in which teachers retain professional agency while receiving collegial support. Similarly, Glickman's model of cooperative professional development emphasizes shared inquiry, reciprocal observation, reflective dialogue, and collective responsibility for instructional improvement (Glickman, 1990). In this model, supervision becomes a developmental process rather than a one-directional judgment of teacher performance.

A central feature of collaborative supervision is the use of pre-observation conferences, classroom observations, and post-observation conferences. During the pre-observation stage, teachers and supervisors negotiate the purpose and focus of the observation. Classroom observation is then conducted using mutually agreed criteria, while the post-observation conference provides space for teacher self-reflection and evidence-based feedback. This sequence can strengthen professional trust because teachers understand what will be observed and are given an active role in interpreting the findings. When implemented consistently, collaborative supervision may support teachers' pedagogical decision-making, reflective capacity, openness to feedback, and willingness to experiment with alternative instructional practices (Glickman et al., 2014; Sergiovanni et al, 2013).

The developmental value of collaborative supervision may be extended through cross-school visitation. Cross-visitation involves educators from different schools observing, documenting, and discussing one another's instructional practices. Lytle and Fecho (1991) described this process as professional inquiry involving questioning, observing, documenting, and discussing practice across institutional boundaries. Such interaction can expose teachers and school leaders to instructional approaches that are not commonly used in their own institutions. It can also create opportunities for sharing resources, comparing classroom strategies, and building professional networks across schools. In supervision settings, the participation of supervisors from other schools may reduce the immediate pressure associated with being evaluated by a direct superior. However, these potential benefits depend on the quality of coordination, the clarity of observation procedures, the competence of supervisors, and the availability of systematic follow-up.

Cross-school collaboration is particularly relevant in educational systems where schools differ substantially in resources, institutional capacity, and accreditation status. Schools with stronger instructional cultures may possess more developed planning systems, teaching resources, and professional learning structures, while less-resourced schools may have fewer opportunities for sustained teacher development. Cross-school supervision can provide a mechanism through which instructional knowledge and locally developed practices circulate beyond individual institutions. Nevertheless, it may also reproduce existing inequalities if the process is dominated by higher-status schools or if teachers from less advantaged schools are positioned primarily as recipients rather than equal professional partners. A qualitative examination is therefore needed to understand not only how cross-school supervision is organized but also how participants experience its professional and relational dimensions.

This issue is especially important for teachers of Integrated Science and Social Studies in Indonesian primary education. Under the Merdeka Curriculum, science and social studies are combined into an interdisciplinary subject commonly known as IPAS. The subject requires teachers to connect natural and social phenomena, develop contextual learning activities, use inquiry- and project-oriented approaches, and assess knowledge, skills, and attitudes through varied forms of authentic assessment (Kemendikbudristek, 2022). For many primary teachers, these expectations require substantial changes in lesson planning, content integration, classroom facilitation, and assessment. Teachers may understand science and social studies as separate domains and may therefore encounter difficulties in constructing conceptually coherent interdisciplinary lessons.

The demands placed on IPAS teachers are more complex in madrasahs. In addition to implementing the national curriculum, madrasah teachers are expected to situate learning within an institutional environment shaped by Islamic educational values. This does not mean merely adding religious references to science or social studies content. Rather, teachers are expected to connect academic learning with ethical reflection, responsibility, social awareness, and the contextual realities of their students. Effective IPAS instruction in madrasahs therefore requires interdisciplinary content knowledge, pedagogical flexibility, contextual sensitivity, authentic assessment competence, and the ability to integrate values meaningfully. Existing studies suggest that teachers continue to experience difficulties in integrating science and social studies, implementing inquiry and project-based learning, preparing integrated teaching modules, and applying authentic assessment (Ixfina, 2026; Dzia'ul Haq & Adiningsih, 2026).

The Working Group of Madrasah Ibtidaiyah (*Kelompok Kerja Madrasah Ibtidaiyah*), locally referred to as KKMI, provides a potentially important structure for addressing these challenges. KKMI functions as a professional forum through which madrasah principals coordinate institutional programs, exchange information, organize professional development, and support academic supervision. Because it brings together leaders from different madrasahs, the forum can facilitate supervision beyond the boundaries of a single institution. In Pringgarata District, the KKMI coordinates 17 madrasahs representing different accreditation levels. This institutional diversity creates opportunities for professional exchange, but it also reveals differences in instructional support, access to teaching resources, and teachers' readiness to implement integrated IPAS learning.

The cross-school supervision program examined in this study was developed in response to these conditions. Rather than relying exclusively on supervision by each teacher's own principal, principals were assigned to observe teachers from other madrasahs. The process included collective planning, pre-observation discussions, classroom observation, reflective feedback, and proposed follow-up activities. This arrangement was intended to create a less hierarchical supervisory environment, broaden the range of professional perspectives available to teachers, and encourage the exchange of instructional practices across madrasahs. However, the value of such a model cannot be established solely by reporting numerical changes in teacher scores. It must also be examined through participants' experiences, the nature of the interactions that occurred, the quality of the feedback provided, and the organizational conditions that supported or constrained the process.

Research on academic supervision in Indonesia has frequently examined the role of school principals, the contribution of supervision to teacher performance, and the implementation of collaborative supervision within individual schools. Studies focusing specifically on cross-school collaborative supervision in madrasahs remain limited. Even less attention has been given to how such supervision is experienced by teachers responsible for an interdisciplinary subject such as IPAS. Previous research has not adequately explained how cross-school supervisory partnerships are negotiated, how teachers respond to supervisors from other institutions, how feedback varies across school contexts, or how differences in accreditation and resources shape professional learning.

This study addresses that gap by examining the implementation of cross-school collaborative academic supervision for Integrated Science and Social Studies teachers in a group of Indonesian madrasahs. Rather than treating supervision as a simple intervention with a directly measurable effect, the study investigates it as a situated professional process involving institutional coordination, classroom observation, reflective dialogue, and cross-school interaction. It focuses on how the program was implemented, how teachers and supervisors perceived its contribution to professional learning, and what challenges emerged during the process.

Accordingly, the study was guided by the following research questions:

1. How was cross-school collaborative academic supervision planned and implemented for Integrated Science and Social Studies teachers in the participating madrasahs?
2. How did teachers and supervisors perceive the contribution of cross-school supervision to reflective dialogue, professional learning, and intended improvements in instructional practice?
3. What organizational, pedagogical, and relational challenges influenced the implementation of cross-school collaborative academic supervision?

By addressing these questions, the study contributes to the literature on teacher supervision in three ways. First, it extends collaborative supervision beyond the boundaries of a single school. Second, it examines supervision within the distinctive organizational and curricular context of Indonesian madrasahs. Third, it provides qualitative evidence concerning the professional opportunities and practical limitations of using cross-school supervision to support teachers responsible for interdisciplinary instruction.

METHOD

Research Design

This study employed a qualitative instrumental case study design to examine the implementation of cross-school collaborative academic supervision for Integrated Science and Social Studies teachers in Indonesian madrasahs. The design was selected because the supervision program was investigated within its actual organizational and instructional context, where the boundaries between the program, participating institutions, supervisory relationships, and classroom practices could not be separated clearly.

The case was bounded by the Working Group of Madrasah Ibtidaiyah in Pringgarata District, six participating madrasahs, 12 Integrated Science and Social Studies teachers, and one cycle of cross-school academic supervision conducted in May 2026. The study focused on how the program was planned and implemented, how teachers and supervisors experienced the supervisory process, and what organizational, pedagogical, and relational challenges emerged during its implementation.

The study did not use an experimental or quasi-experimental design. Therefore, numerical ratings contained in the institutional supervision records were treated only as supplementary contextual information. They were not interpreted as statistical evidence that the supervision program caused changes in teacher professionalism.

Research Setting and Participants

The study was conducted within the *Kelompok Kerja Madrasah Ibtidaiyah* (KKMI) or Working Group of Madrasah Ibtidaiyah in Pringgarata District, Central Lombok, West Nusa Tenggara, Indonesia. The professional network coordinated 17 Islamic primary schools, consisting of five madrasahs with accreditation level A, six with accreditation level B, and six with accreditation level C.

Six madrasahs were purposively selected to represent variation in institutional accreditation. Two madrasahs were selected from each accreditation category. Accreditation was used as a contextual characteristic because the participating madrasahs differed in

instructional resources, professional support, school management, and teachers' access to learning opportunities. It was not treated as an experimental grouping variable.

The primary participants were 12 teachers responsible for Integrated Science and Social Studies. Four teachers represented madrasahs with accreditation level A, four represented level B, and four represented level C. The inclusion criteria required participants to teach Integrated Science and Social Studies, participate in the first cycle of the cross-school supervision program, represent one of the selected madrasahs, and voluntarily consent to interviews, classroom observation, and document review.

The study also involved eight supporting informants. They consisted of six madrasah principals who served as cross-school supervisors, the chair of the Working Group of Madrasah Ibtidaiyah, and its secretary. Table 1 summarizes the composition and contribution of the participants.

Table 1. Participant composition

Participant group	Number	Representation	Contribution to the study
- Integrated Science and Social Studies teachers	12	Four teachers from each accreditation category	Experiences of supervision, classroom practice, feedback, professional learning, and implementation challenges.
- Madrasah principals serving as supervisors	6	Two principals from each accreditation category	Planning, classroom observation, feedback practices, and cross-school coordination.
- Chair of the Working Group of Madrasah Ibtidaiyah	1	District professional network	Program rationale, coordination, implementation, and institutional evaluation.
- Secretary of the Working Group of Madrasah Ibtidaiyah	1	District professional network	Scheduling, documentation, communication, and administrative procedures.
Total	20	Six madrasahs and the district professional network	Multiple perspectives on the supervision process.

The participant composition allowed the study to examine the supervision program from teacher, supervisor, and organizational perspectives. It also provided contextual variation across madrasahs with different accreditation levels.

To maintain confidentiality, personal names were replaced with participant codes. Teachers were identified using codes such as T-A1, T-B2, and T-C3, in which the letter indicated the accreditation category. Supervisors were identified using codes such as S-A1, S-B1, and S-C1, while the two professional network officials were identified as K1 and K2. Identifiable school names were excluded from the article.

Cross-School Supervision Procedure

The supervision program combined collaborative academic supervision with a cross-school assignment strategy. Rather than being supervised exclusively by their own principals, participating teachers were observed by principals assigned from other madrasahs. The arrangement was coordinated by the Working Group of Madrasah Ibtidaiyah and was intended to reduce the dominance of direct administrative relationships, broaden the perspectives available to teachers, and support the exchange of instructional practices across institutions.

The first supervision cycle was implemented on May 13 and 14, 2026. The process consisted of collective planning, a pre-observation conference, classroom observation, a post-observation conference, and follow-up planning. Table 2 presents the sequence and purpose of these activities.

Table 2. Cross-school collaborative supervision process

Stage	Main activity	Participants	Primary outcome
- Collective planning	Determination of the schedule, supervisor assignments, program procedures, and observation priorities.	Professional network officials and principals	Supervision schedule and cross-school assignments
- Pre-observation conference	Discussion of the lesson plan, teacher needs, observation focus, and observation instrument.	Teacher and assigned supervisor or supervisors	Agreed focus of classroom observation
- Classroom observation	Non-participant observation of an Integrated Science and Social Studies lesson.	Teacher and cross-school supervisor or supervisors	Classroom evidence and observation notes
- Post-observation conference	Teacher self-reflection, evidence-based feedback, and discussion of areas for improvement.	Teacher and supervisor or supervisors	Identification of strengths and development needs
- Follow-up planning	Agreement on instructional revision, mentoring, training, or continued reflection.	Teacher, supervisor, and professional network where relevant	Proposed professional development activities

The planning stage began with a coordination meeting involving professional network officials and participating principals. The meeting established the supervision schedule, clarified the roles of the supervisors, and assigned principals to teachers from other madrasahs.

Before classroom observation, teachers and supervisors discussed the planned lesson and agreed on the aspects to be observed. The shared observation focus included differentiated instruction, student participation, instructional media, authentic assessment, and classroom management. This discussion was intended to ensure that the teacher understood the purpose of the observation and had an opportunity to explain the instructional context.

Each teacher was observed during one regular lesson lasting approximately 70 minutes, equivalent to two 35-minute instructional periods. Supervisors observed from the back or side of the classroom and did not intervene in the teaching process. They used the agreed observation instrument to document teacher actions, student participation, instructional activities, classroom interactions, assessment practices, and the integration of science and social studies content.

Following the lesson, the teacher and supervisor conducted a reflective conference lasting approximately 30 to 40 minutes. The teacher was invited to evaluate the lesson before receiving feedback. The discussion addressed aspects that had worked well, difficulties encountered during teaching, and practices that could be improved. Follow-up plans included revisions to lesson modules and assessment rubrics, increased use of instructional media, development of differentiated activities, professional mentoring, and participation in training or workshops.

Data Collection

Data were collected through semi-structured interviews, non-participant observation, and document analysis. These methods were used to obtain information about the formal design of the program, its actual implementation, participant experiences, classroom practices, and proposed follow-up activities.

Semi-structured interviews were conducted with the 12 teachers and the eight supporting informants. Teacher interviews were guided by 32 questions organized around nine domains: previous supervision experiences, supervision planning, classroom observation, reflective dialogue, supervisory feedback, follow-up activities, perceived professional learning, Integrated Science and Social Studies teaching, and implementation challenges. The questions

served as a flexible guide, and additional probes were used when clarification or elaboration was required.

Interviews generally lasted between 30 and 60 minutes. Participant responses were documented in prepared interview sheets and expanded into detailed notes after each interview. Interviews with principals focused on their experiences as cross-school supervisors, the use of observation instruments, feedback practices, differences among school contexts, and difficulties in coordinating supervision. Interviews with the chair and secretary focused on program planning, institutional coordination, scheduling, documentation, and follow-up arrangements.

Non-participant observation was conducted during classroom teaching and supervisory interactions. Classroom observations focused on lesson organization, student engagement, instructional strategies, the integration of science and social studies, the use of media and practical materials, assessment practices, and classroom management. Observations of pre-observation and post-observation interactions focused on the quality of communication, opportunities for teacher participation, the use of classroom evidence, the tone of feedback, and the clarity of proposed follow-up activities.

Document analysis was conducted to compare formal program expectations with the implementation described by participants and observed in the field. The documents reviewed included the organizational decree of the professional network, supervision work programs, cross-school schedules, observation instruments, supervision reports, meeting minutes, teacher reflection notes, Integrated Science and Social Studies lesson modules, mentoring records, attendance lists, and photographic documentation.

The three sources of data were used in a complementary manner. Interviews provided participants' interpretations, observations documented actual classroom and supervisory interactions, and documents supplied evidence of the formal structure and administrative record of the program.

Data Analysis

The data were analyzed using the interactive qualitative analysis framework of Miles, Huberman, and Saldaña (2014), which consists of data condensation, data display, and conclusion drawing and verification. Analysis began during data collection and continued as interview notes, observation records, and documents were reviewed.

During data condensation, the researchers read the collected material repeatedly and identified statements, events, and documentary evidence relevant to the research questions. Relevant data were assigned descriptive codes representing issues such as shared planning, clarity of observation focus, teacher anxiety, reflective communication, supervisory feedback, cross-school perspectives, instructional resource limitations, interdisciplinary teaching, and follow-up support.

Related codes were compared and grouped into broader categories. The categories were organized around the implementation of the supervision process, participants' experiences of professional learning, and the challenges affecting the program. Comparisons were made across teachers and supervisors, across accreditation contexts, and across interview, observation, and documentary evidence.

The coded data were then organized in analytical matrices linking categories with participant codes, observation notes, and relevant documents. These displays were used to identify recurring patterns, differences among participants, and relationships between organizational procedures and classroom experiences.

The final themes were developed by examining how the categories answered the research questions. Interpretations were revised when evidence from one source contradicted evidence from another. Numerical ratings found in supervision records were used only to describe the institutional context and were not used to establish statistical significance or causal effects.

Trustworthiness

The trustworthiness of the study was addressed through credibility, transferability, dependability, and confirmability. Credibility was strengthened through source and method triangulation. Information provided by teachers was compared with accounts from principals and professional network officials. Interview evidence was also examined alongside classroom observations and program documents.

Member checking was conducted by confirming the accuracy of interview summaries and central interpretations with the relevant participants. This process focused on whether the researchers had represented participants' experiences and statements appropriately.

Transferability was supported through a detailed description of the research setting, participant composition, accreditation variation, supervision procedures, and instructional context. These descriptions allow readers to assess the relevance of the findings to other madrasah networks or cross-school professional development programs.

Dependability was addressed by maintaining records of interview guides, completed interview sheets, observation notes, supervision instruments, program documents, and analytical categories. Confirmability was supported by linking the findings to more than one source of evidence and by retaining evidence that did not fully support the dominant interpretation.

Ethical Considerations

Permission to conduct the study was obtained from the leadership of the Working Group of Madrasah Ibtidaiyah and the participating madrasahs. Participants received information about the purpose of the study, the procedures involved, the voluntary nature of participation, and their right to withdraw without professional consequences. Written informed consent was obtained before interviews and classroom observations were conducted.

Confidentiality was maintained by removing personal names and identifiable institutional information from the article. Data were stored for research purposes and were not used as a basis for administrative sanctions or personnel evaluation. Quotations were translated and lightly edited for readability while preserving their original meaning.

RESULTS AND DISCUSSION

The findings are organized into six interconnected areas that correspond to the research questions and the evidence obtained from interviews, classroom observations, supervisory records, and program documents. These areas concern the coordination of the supervision process, teachers' experiences of cross-school classroom observation, reflective dialogue after observation, variation in the feedback provided across madrasah contexts, the professional learning needs identified during the program, and the conditions required to sustain follow-up activities. Because the study examined only one supervision cycle, the findings are interpreted as evidence of program implementation, participant experience, and perceived professional learning rather than as proof of causal or long-term improvement in teacher professionalism. The numerical ratings available in the supervision records are also treated descriptively, since the study did not employ a control group, standardized repeated measurements, or inferential statistical analysis. Table 3 summarizes the principal findings, the evidence on which they were based, and the interpretations developed from the case.

Table 3. Overview of the principal findings

Area of finding	Main evidence	Central interpretation
- Coordinated planning and pre-observation discussion	Coordination records, supervision schedules, teacher interviews, and observation instruments.	Advance discussion clarified the procedures and gave teachers an opportunity to understand and discuss the observation priorities.
- Cross-school classroom observation	Cross-school assignments, classroom observation	External supervisors broadened the sources of professional feedback and

Area of finding	Main evidence	Central interpretation
	records, and participant interviews.	created some distance from routine internal administrative relationships.
- Reflective post-observation dialogue	Teacher reflections, post-observation discussions, and feedback records.	Allowing teachers to reflect before receiving feedback made the supervisory conversation more participatory and developmental.
- Variation in feedback across contexts	Feedback records grouped by accreditation context.	Feedback differed in specificity, indicating that teachers required different forms and levels of professional assistance.
- Professional learning needs	Supervision ratings, teacher interviews, observations, and instructional documents.	The most prominent needs concerned interdisciplinary planning, innovative teaching, authentic assessment, and access to instructional resources.
- Follow-up and sustainability	Agreed improvement plans and KKMI program records.	The developmental value of the program depended on whether planned mentoring and professional development were implemented beyond the first cycle.

As indicated in Table 3, the program involved more than observing and rating classroom performance. Its structure connected district-level coordination, teacher preparation, classroom evidence, professional dialogue, and proposed follow-up activities. The strongest evidence concerned the procedures used during the first supervision cycle and participants' immediate responses to those procedures. Evidence of actual changes in subsequent classroom practice was more limited because the study did not observe a second teaching cycle after teachers had received feedback. The discussion therefore distinguishes between what was implemented, what participants perceived as helpful, and what was merely proposed for later implementation. This distinction prevents the program from being described as having conclusively improved professionalism after only two days of activity. It also shifts attention from numerical change to the mechanisms through which supervision may support professional learning, including clarity of expectations, teacher self-reflection, access to perspectives from other madrasahs, and the availability of sustained mentoring.

Coordinated Planning and Negotiated Observation Priorities

The first supervision stage was coordinated through a meeting organized by the Working Group of Madrasah Ibtidaiyah. The meeting determined the implementation dates, assigned principals to teachers from other madrasahs, and clarified the procedures for pre-observation, classroom observation, and post-observation discussion. The cross-school assignments involved principals and teachers from madrasahs representing accreditation categories A, B, and C. Before entering the classroom, teachers and assigned supervisors discussed the lesson plan and the observation instrument. They also reviewed five areas selected as common supervisory priorities: differentiated instruction, student participation, instructional media, authentic assessment, and classroom management. These priorities reflected the instructional expectations of the Merdeka Curriculum, but they were also discussed in relation to each teacher's planned lesson. The pre-observation process therefore combined an institutionally defined framework with opportunities for teachers to explain their classroom context, clarify the focus of observation, and prepare the evidence that supervisors would examine.

One teacher described the value of this preparatory stage as follows:

> *"The pre-observation discussion was very important. We developed the same understanding of the purpose of supervision, the instrument, and the observation focus. I knew what would be assessed and could prepare the lesson more carefully."* (T-A3, interview, May 14, 2026)

A second teacher similarly emphasized the opportunity to discuss the planned lesson:

> *"The pre-observation meeting helped me understand the purpose of supervision and the aspects that would be observed. I could also discuss my lesson plan with the supervisor."* (T-A1, interview, May 14, 2026)

These statements show that the preparatory meeting reduced uncertainty and made the observation procedures more transparent. Teachers did not enter the process without knowing the purpose of the visit or the areas that would receive attention. The discussion also allowed them to explain instructional decisions that might otherwise have been interpreted only from the supervisor's external perspective. This finding is consistent with the model described by Amien et al. (2024), in which collaborative supervision begins with an agreement concerning the purpose, schedule, instrument, and observation focus. Glickman et al. (2014) likewise argue that observation becomes more developmentally useful when the evidence collected is connected to a problem or instructional concern recognized by both the teacher and the supervisor. The present study extends this principle to a cross-school context, although teacher agency remained bounded because the broad priorities, schedule, and supervisor assignments were determined by the professional network rather than selected independently by each teacher.

The planning process should therefore be understood as negotiated participation rather than complete teacher control. Teachers had an opportunity to interpret and contextualize the established criteria, but the institutional leadership retained authority over the program structure. This distinction is relevant because a meeting cannot automatically be classified as collaborative merely because teachers are present. Genuine collaboration requires teachers' contributions to affect the way evidence is collected, interpreted, and used. In this case, the interview evidence suggests that the pre-observation discussion made the procedures clearer and enabled teachers to discuss their lesson plans, but there is insufficient evidence that teachers could substantially revise the network's observation priorities. Even so, the process represented a movement away from unannounced or exclusively administrative supervision. Tunnisa (2023) emphasizes that pre-observation meetings should create a setting in which teachers feel sufficiently comfortable to communicate their needs and expectations, while Sopaheluwakan et al. (2020) identify openness and organizational support as important conditions for collaborative supervision. The findings support both arguments but also demonstrate that formal participation and decision-making authority are not necessarily equivalent.

Cross-School Classroom Observation

Classroom observation was conducted during one regular Integrated Science and Social Studies lesson lasting approximately two 35-minute periods. Supervisors were instructed to sit at the back of the classroom, record evidence using the agreed instrument, and avoid interrupting the teaching process. The study records state that the supervision model involved principals assigned across institutional boundaries rather than teachers being observed exclusively by their own principals. This arrangement was intended to reduce the direct administrative character of supervision and expose teachers to perspectives developed in other madrasahs. The available evidence confirms that cross-school assignments were implemented, although the number of supervisors present in every classroom was not documented consistently in the assignment table. One participant explicitly reported being observed by three supervisors, while the broader records indicate that observation involved assigned supervisors from different madrasahs. The findings therefore support the existence of a cross-school model, but they do not justify assuming that every teacher experienced the same number or composition of observers.

One teacher described the classroom observation procedure in the following terms:

> *"The supervision process was conducted professionally. I was observed by three different supervisors. They arrived at the agreed time, sat at the back of the classroom, and did not interrupt the learning process." (T-A3, interview, May 14, 2026)*

The chair of the professional network provided a broader organizational assessment:

> *"The cross-school supervision was implemented well. The supervisors conducted the pre-observation, classroom observation, and post-observation stages professionally and used a supportive approach. The teachers were cooperative and open to feedback."* (K1, interview, May 18, 2026)

The cross-school arrangement created an opportunity to broaden the sources of feedback available to teachers. Supervisors from other institutions were not involved in the teachers' routine administrative evaluation, and this professional distance may have reduced some of the pressure associated with being observed by a direct superior. The arrangement also allowed supervisors to draw on experiences developed in madrasahs with different accreditation levels, resources, leadership practices, and instructional cultures. This finding is compatible with Lytle and Fecho's (1991) description of cross-visitation as a process of questioning, observing, documenting, and discussing practice across institutional settings. Batkunde (2022) similarly argues that cross-school supervision can expand educators' perspectives and facilitate the circulation of professional knowledge. However, the data do not demonstrate that external assignment automatically produced objective assessment. No comparison was conducted between ratings given by internal and external supervisors, and inter-rater consistency was not formally tested. The defensible interpretation is therefore that cross-school assignment widened the perspectives involved in feedback, not that it eliminated assessment bias.

The presence of supervisors from other madrasahs also generated a tension between professional distance and increased visibility. External supervisors may be perceived as less directly connected to personnel decisions, but they remain school leaders who occupy positions of authority. The participation of several observers can provide different perspectives, yet it may also make teachers more conscious of being evaluated. This tension is reflected in the finding that all 12 teachers experienced nervousness during supervision despite the collaborative procedures. Siagian et al. (2025) report that directive or strongly evaluative supervision can produce anxiety, while Sergiovanni and Starratt (2002) argue that developmental supervision requires relationships based on professional respect and open communication. The present findings suggest that changing the identity of the observer is not sufficient to remove evaluation-related anxiety. Psychological safety also depends on repeated interaction, confidentiality, consistency in the use of evidence, and confidence that weaknesses discussed during supervision will be treated as professional learning needs rather than as grounds for administrative sanction.

Reflective Dialogue and Supervisory Feedback

The post-observation conference was conducted after the classroom lesson and generally lasted between 30 and 40 minutes. Teachers were invited to evaluate their own instruction before supervisors presented observations or recommendations. They discussed the aspects of the lesson that had worked as intended, difficulties that occurred during implementation, and changes they considered necessary. The supervisors then responded to the teacher's reflection and provided feedback intended to be constructive and solution-oriented. The sequence is significant because it placed teacher interpretation before supervisory judgment. Classroom evidence can be misunderstood when detached from the teacher's intentions, student responses, and situational decisions, whereas self-reflection gives the teacher an opportunity to explain why particular activities were selected or modified. The post-observation conference therefore functioned not only as a delivery mechanism for recommendations but also as a setting in which the meaning of the observed lesson was negotiated between the teacher and the supervisor.

One participant explained the experience as follows:

> *"I was given the first opportunity to reflect on the lesson. I explained what had worked well, what difficulties I encountered, and what I intended to improve. I felt that my opinion was respected because I was allowed to speak first."* (T-A3, interview, May 14, 2026)

This account reflects the central principle of collaborative supervision proposed by Glatthorn (1984) and Glickman (1990), namely that teachers should participate actively in diagnosing and improving their own professional practice. Teacher self-reflection does not remove the supervisor's responsibility to identify weaknesses, but it changes the conversation from one-way correction to joint interpretation. Sergiovanni et al. (2017) emphasizes that post-observation feedback should be specific, constructive, and linked to practical improvement, while Glickman et al. (2014) recommend using systematically collected classroom evidence rather than general impressions. The present data indicate that teachers were given space to reflect, although the quality of subsequent feedback differed across institutional contexts. This difference is important because an invitation to reflect is only one component of developmental supervision. The usefulness of the process also depends on whether supervisors can transform observation evidence into clear, feasible, and context-sensitive recommendations.

The supervision records distinguished the feedback provided to teachers from madrasahs with different accreditation levels. Table 4 presents these recorded characteristics. The categories should not be understood as standardized measures of feedback quality because the original records did not describe a formal coding or rating procedure. They nevertheless provide useful qualitative evidence of variation in the specificity and practical direction of the feedback. The table indicates that teachers in A-accredited madrasahs received feedback described as specific, constructive, and accompanied by examples, while feedback in B-accredited settings was specific and generally indicated the direction of improvement. Feedback for teachers in C-accredited madrasahs was described as more general and as requiring additional professional assistance. This variation suggests that the same supervisory structure did not produce an identical professional learning experience for all participants.

Table 4. Characteristics of supervisory feedback across accreditation contexts

Madrasah accreditation	Characteristics recorded in the supervision documents
A	Specific, constructive, and accompanied by concrete examples
B	Specific and constructive, with a direction for improvement
C	More general and requiring further professional assistance

The pattern in Table 4 may be explained in several ways, none of which can be established conclusively from the present data. Teachers in A-accredited madrasahs may have demonstrated more established planning and instructional practices, allowing supervisors to concentrate on particular refinements and provide concrete examples. Teachers in C-accredited madrasahs may have required improvement across several areas simultaneously, leading supervisors to provide broader comments. A second possibility is that supervisors were less able to translate their recommendations into feasible actions for settings with more limited resources. Widodo (2025) argues that the effect of supervision is shaped by institutional input and organizational support, while Sopaheluwakan et al. (2020) identify resources, leadership commitment, and professional culture as conditions influencing collaborative supervision. The findings therefore should not be interpreted as evidence that accreditation directly determines individual teacher competence. Instead, accreditation functions as a contextual indicator associated with differences in instructional support, infrastructure, leadership, and access to continuing professional development.

The more general feedback recorded for C-accredited madrasahs is particularly important because teachers with broader professional needs may require the most concrete and sustained assistance. General recommendations such as "use more innovative methods" or "improve

assessment" offer limited guidance unless accompanied by examples, materials, modeling, and opportunities to practise. Equal supervision should therefore not be understood as providing identical feedback to every teacher. Developmental supervision requires differentiated assistance that responds to teacher readiness and institutional capacity. Miftakhi and Malagola (2025) emphasize the role of systematic guidance in developing pedagogical competence, while Herlilawati (2021) associates collaborative supervision with improvement in lesson planning and classroom management. The present study adds that cross-school supervision must be designed carefully to prevent institutional differences from producing unequal access to useful feedback. Teachers in less-resourced settings may need longer conferences, mentoring, demonstration lessons, and repeated observation rather than broader criticism.

Descriptive Profile of Teacher Competencies

The supervision records included descriptive ratings for four dimensions of teacher professionalism: pedagogical, professional, social, and personality competence. The recorded overall means were 84.3 for pedagogical competence, 83.2 for professional competence, 84.2 for social competence, and 85.2 for personality competence. Ratings were also summarized by madrasah accreditation context, with overall means of 87.3 for teachers from A-accredited madrasahs, 84.3 for those from B-accredited madrasahs, and 81.1 for those from C-accredited madrasahs. These figures are presented in Table 5 as contextual records generated during the supervision program. They should not be interpreted as standardized measures of stable teacher competence or as evidence of statistically significant differences. The qualitative case study did not include a validated comparative test, inferential analysis, or an experimental design capable of establishing that accreditation or participation in the program caused the differences.

Table 5. Descriptive competency ratings recorded at the end of the supervision cycle

Accreditation context	Pedagogical	Professional	Social	Personality	Overall mean
A	87.5	86.3	87.3	88.0	87.3
B	84.3	83.3	84.3	85.3	84.3
C	81.3	80.0	81.0	82.3	81.1
All teachers	84.3	83.2	84.2	85.2	84.0

Table 5 shows that personality competence received the highest descriptive rating, whereas professional competence received the lowest. The relatively high personality rating corresponds with interview and observation evidence showing that teachers were generally cooperative, receptive to feedback, and willing to participate in reflection. Siagian et al. (2025) similarly connect participatory supervision in Islamic educational settings with openness, responsibility, and the development of personal and spiritual dimensions. However, a high rating for openness during supervision should not be interpreted as a comprehensive assessment of teacher personality because the study examined a limited set of interactions during one supervision cycle. The lower professional rating is more directly connected to specific difficulties identified in the data, particularly interdisciplinary content integration, project- and inquiry-oriented instruction, and authentic assessment. Sianipar et al. (2025) identify professional competence as a continuing challenge in academic supervision, while Sari et al. (2024) argue that collaborative approaches can support professional growth by creating opportunities for shared problem-solving rather than directive correction.

The differences among accreditation contexts were consistent across all four recorded dimensions, but they must be interpreted as contextual patterns rather than statistically verified gaps. Teachers from A-accredited madrasahs received higher mean ratings than teachers from C-accredited madrasahs in pedagogical, professional, social, and personality competence. The largest descriptive difference appeared in professional competence, where the recorded means were 86.3 and 80.0, respectively. This pattern corresponds with the qualitative evidence that teachers in lower-accredited settings required additional support in integrated planning and innovative instruction. Nevertheless, institutional accreditation may reflect multiple factors

beyond teacher ability, including resource availability, leadership, administrative systems, access to training, and organizational culture. Widodo (2025) notes that supervisory outcomes are influenced by institutional conditions, and Kavung et al. (2024) emphasize that professional development depends on continuing support from school leadership. The findings therefore justify differentiated support but do not justify labeling teachers in C-accredited madrasahs as inherently less competent.

Pedagogical competence received an overall descriptive mean of 84.3 and included planning, implementation, assessment, and follow-up. The supervision records indicated that some teachers required assistance with differentiated instruction and the preparation of integrated teaching modules. This result is consistent with Miftakhi and Malagola's (2025) argument that academic supervision can contribute to pedagogical development when it connects planning with actual classroom implementation. Social competence received a similar mean of 84.2 and was reflected in teachers' communication with supervisors and openness to collegial discussion. However, the discomfort reported by some teachers, particularly those from lower-accredited contexts, shows that social participation during supervision may still be affected by status differences. Sergiovanni and Starratt (2002) maintain that open professional communication requires relationships based on trust rather than authority alone. The descriptive profiles therefore reinforce the qualitative interpretation that teacher professionalism cannot be separated from the relational and institutional conditions in which supervision is conducted.

Pedagogical and Organizational Challenges

The data identified five recurring challenges during the supervision cycle. Two were reported across all 12 teachers: nervousness during classroom observation and limited access to practical equipment or instructional materials. Five teachers experienced difficulty integrating science and social studies, two had not yet used project-based learning or inquiry-oriented instruction, and two had not implemented project assessment. Table 6 summarizes these issues and the responses proposed or initiated during the program. The final column is deliberately labeled "proposed or initiated response" because several actions, such as workshops and continuing mentoring, had not been fully implemented or evaluated at the time of data collection. This distinction is necessary because a planned intervention should not be reported as a completed solution. The table therefore documents the professional learning agenda generated through supervision rather than demonstrating that the identified difficulties had already been resolved.

Table 6. Challenges and proposed or initiated responses

Challenge	Frequency	Proposed or initiated response
- Nervousness during supervision	12 teachers	Reflective communication and a supportive supervisory approach.
- Limited practical equipment and materials	12 teachers	Development of simple teaching aids from locally available materials.
- Difficulty integrating science and social studies	5 teachers	Training and mentoring in interdisciplinary lesson planning.
- Limited use of project-based learning or inquiry	2 teachers	Workshops on student-centered instructional strategies.
- Limited use of project and portfolio assessment	2 teachers	Assistance in developing authentic assessment tasks and rubrics.

The universal experience of nervousness demonstrates that collaborative procedures did not entirely remove the psychological pressure of classroom observation. Teachers may have understood that the program was intended to be developmental, but the presence of school leaders and the use of an observation instrument continued to communicate an evaluative function. The proposed use of reflective and supportive communication was therefore relevant,

but it should be viewed as the beginning of a longer trust-building process. Siagian et al. (2025) associate directive supervision with tension and reduced openness, whereas Glatthorn (1984) emphasizes equal professional partnership as a condition of collaborative supervision. The present findings suggest that equality cannot be created solely by changing terminology or assigning an external supervisor. It requires repeated interaction, clear confidentiality procedures, consistent evidence-based feedback, and assurance that teachers can acknowledge weaknesses without administrative consequences. The anxiety reported by all teachers should therefore be treated as a central implementation issue rather than a minor emotional reaction.

The lack of practical equipment was also reported across all participating teachers and affected the feasibility of inquiry, demonstration, and project activities. Supervisors proposed developing simple instructional materials from locally available or recycled objects. This response is appropriate for immediate classroom practice, particularly in schools with limited budgets, but it cannot replace institutional investment in adequate resources. Sopaheluwakan et al. (2020) identify resource availability as one of the conditions affecting the success of collaborative supervision, while Widodo (2025) notes that professional guidance is constrained when teachers lack the facilities required to apply recommendations. Cross-school collaboration may help participants exchange ideas and share existing materials, but resource scarcity is a structural issue that cannot be solved only by teacher creativity. Recommendations concerning innovative instruction should therefore be matched with realistic consideration of classroom size, equipment, internet access, preparation time, and financial support.

Difficulty integrating science and social studies was reported for five teachers and represented the most prominent subject-specific professional need. IPAS requires teachers to connect natural phenomena with social, environmental, economic, or community dimensions rather than present science and social studies as unrelated units. Ixfina (2026) reports that many primary teachers continue to experience difficulty translating the interdisciplinary rationale of the Merdeka Curriculum into coherent teaching modules, while Dzia'ul Haq and Adiningsih (2026) identify teacher readiness as a constraint on the integration of curricular content and values. The present findings reinforce those concerns by showing that the difficulty was visible during actual supervision activities. Cross-school observation was useful because recommendations could be connected to a specific lesson rather than limited to abstract curriculum explanations. Nevertheless, the effectiveness of the proposed mentoring will depend on whether teachers receive examples of integrated units, opportunities for collaborative planning, and feedback on revised lesson modules.

The findings concerning project-based learning, inquiry, and authentic assessment should be interpreted cautiously. Two teachers were explicitly identified as not using project-based learning or inquiry, but this does not demonstrate that the other ten teachers implemented these approaches consistently or with high quality. Similarly, two teachers had not used project assessment, although the data do not provide a detailed evaluation of the assessment practices used by the remaining participants. The appropriate professional response is therefore not merely to require teachers to label their lessons as project- or inquiry-based. Supervisors should examine the quality of student questioning, investigation, collaboration, evidence use, and reflection. Authentic assessment also requires tasks and rubrics that capture students' application of knowledge rather than reliance on written tests alone. Sianipar et al. (2025) emphasize that supervision should contribute to instructional quality, while Sari et al. (2024) associate collaborative supervision with teacher openness to instructional innovation. The present study indicates that such innovation requires concrete modeling and follow-up, not only recommendations made during a single conference.

Follow-Up, Sustainability, and Contribution of the Model

The post-observation discussions produced several planned follow-up activities, including revision of assessment rubrics, increased use of instructional media, improvement of differentiated learning, written reflection after teaching, mentoring, and professional

workshops. The Working Group of Madrasah Ibtidaiyah also planned post-supervision assistance to monitor teacher development. These plans show that participants recognized classroom observation and feedback as incomplete without continued support. However, data were collected during or immediately after the first supervision cycle, so the study could document intended follow-up but not verify whether teachers subsequently revised their instruction, used the proposed assessment instruments, or received repeated mentoring. A reflective discussion may increase awareness of professional needs, but awareness alone does not ensure sustained change. Teachers require time to revise materials, opportunities to test new approaches, access to resources and examples, and further observation to evaluate how feedback has been applied.

Sustainability therefore depends on whether the professional network converts individual recommendations into an organized cycle of professional learning. A second observation cycle could examine how teachers used previous feedback, while shared lesson-planning sessions could support interdisciplinary module development. Mentoring should be documented through specific goals, schedules, and evidence of revised practice rather than conducted only through informal communication. Sopaheluwakan et al. (2020) argues that professional development is strengthened by an organizational culture that supports continuous learning, and Mukhlisa (2026) emphasizes the importance of sustained academic supervision. The present study supports these positions but adds a network-level dimension: KKMI can coordinate professional learning across institutional boundaries, particularly where individual madrasahs lack sufficient supervisory or instructional resources. The network's role should extend beyond assigning observers to include supervisor preparation, feedback calibration, resource sharing, mentoring, and evaluation of follow-up actions.

The findings contribute to the theory of collaborative supervision by showing how its core practices can be organized across schools rather than only within a single institution. The program incorporated shared planning, non-interventionist classroom observation, teacher-first reflection, constructive feedback, and proposed professional assistance. These practices are broadly consistent with the developmental perspectives of Glatthorn (1984), Glickman (1990), and Glickman et al. (2014). The cross-school dimension also reflects Lytle and Fecho's (1991) conception of professional inquiry across institutional contexts. At the same time, the study qualifies strong claims about the model. Cross-school assignment did not eliminate anxiety, guarantee equivalent feedback, or resolve inequalities in resources and professional support. Its contribution lies in creating a formal structure through which different madrasahs can examine instructional practice and discuss improvement, but the quality of that structure depends on supervisory competence, trust, contextual responsiveness, and follow-up.

Practically, the model appears most useful when treated as a framework for differentiated professional learning rather than as a short-term method for producing higher supervision scores. Teachers from different institutional settings did not require identical assistance, and the feedback records show that teachers in C-accredited madrasahs needed more concrete and sustained support. Supervisors should therefore be prepared to adapt their guidance to the teacher's starting point and the resources available in the school. Cross-school supervision can broaden perspectives and reduce exclusive reliance on the teacher's direct principal, but reciprocity must be protected so that lower-accredited madrasahs are not positioned merely as deficient recipients. Every institution may possess contextual knowledge and practices that contribute to the network. When supported by repeated cycles, evidence-based feedback, shared resources, and mentoring, the model has the potential to develop KKMI from a coordination forum into a cross-school professional learning community.

CONCLUSION

This study shows that cross-school collaborative academic supervision can be organized as a structured professional process involving collective planning, pre-observation discussion, classroom observation, teacher self-reflection, evidence-based feedback, and follow-up

planning. Within the participating madrasahs, the cross-school arrangement broadened the sources of professional feedback and reduced exclusive dependence on supervision by each teacher's own principal. Teachers valued the clarity provided before observation and the opportunity to reflect on their lessons before receiving supervisory comments. These features made the process more participatory and development-oriented, although the program did not remove the evaluative character of supervision. All participating teachers still experienced nervousness during classroom observation, indicating that professional trust and psychological safety require more than changes in supervisor assignment. They also depend on repeated interaction, confidentiality, consistent use of evidence, and assurance that supervision is intended for professional development rather than administrative sanction.

The supervision process also identified several professional learning priorities, particularly interdisciplinary lesson planning, the integration of science and social studies, inquiry- and project-oriented instruction, authentic assessment, and the use of instructional resources. The descriptive ratings in the supervision records suggested stronger results for personality competence and weaker results for professional competence, while teachers from lower-accredited madrasahs appeared to require more concrete and sustained support. These patterns should be interpreted as contextual indicators rather than statistically verified differences because the study examined only one supervision cycle and did not employ standardized repeated measurements. The findings therefore do not establish that cross-school supervision caused measurable or lasting improvement in instructional practice. Instead, they indicate that the model created a useful framework for reflective dialogue, professional feedback, and intended instructional improvement. Its longer-term value will depend on whether the planned mentoring, workshops, resource support, and repeated observation cycles are implemented consistently.

RECOMMENDATION

The Working Group of Madrasah Ibtidaiyah should develop cross-school collaborative supervision into a continuous professional learning cycle rather than a one-time observation activity. Each cycle should include clearly documented pre-observation goals, calibrated observation instruments, teacher-led reflection, specific follow-up targets, and a subsequent observation to examine how earlier feedback has been applied. Supervisors should receive regular preparation in evidence-based feedback, reflective questioning, confidentiality, and context-sensitive mentoring. Teachers in lower-accredited madrasahs should receive more concrete and sustained support through demonstration lessons, collaborative lesson planning, shared Integrated Science and Social Studies modules, authentic assessment rubrics, and examples of inquiry- and project-based activities that can be adapted to local conditions. Madrasah leaders and the professional network should also allocate resources for practical materials, locally developed teaching aids, digital media, and scheduled teacher collaboration. Future studies should examine multiple supervision cycles, include follow-up observations after teachers implement recommendations, and analyze revised lesson plans, assessment instruments, and classroom practices. A mixed-methods design may be considered when valid competency measures, consistent pre- and post-supervision procedures, and inter-rater agreement data are available.

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AUTHOR CONTRIBUTIONS STATEMENT

Name of Author	C	M	So	Va	Fo	I	R	D	O	E	Vi	Su	P	Fu
Kholidi	✓	✓	✓	✓	✓	✓		✓	✓	✓			✓	
Muhali	✓	✓				✓		✓	✓	✓	✓	✓		
Lovy Herayanti	✓		✓	✓			✓			✓	✓		✓	✓

CONFLICT OF INTEREST STATEMENT
Authors state no conflict of interest.

INFORMED CONSENT
We have obtained informed consent from all individuals included in this study.

ETHICAL APPROVAL
This research involving human participants complied with all relevant national regulations and institutional policies, adhered to the principles of the Declaration of Helsinki, obtained written informed consent from all participants, and was approved by Mandalika University of Education.

DATA AVAILABILITY
The data that support the findings of this study are available from the corresponding author, upon reasonable request.

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