

Development of an Andragogy-Based Partnership Supervision System for Madrasah Principals

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Abstract

Background - Academic supervision is a function of madrasah principals that assists teachers in improving the quality of learning processes and outcomes. However, literature review and a preliminary survey in public madrasahs in Sumedang Regency indicated that supervision remained interrogative, emphasized inspections to identify errors, did not encourage teachers to try new practices, and provided little opportunity for teachers to analyze weaknesses in their teaching.

Research Urgency - This article examines an andragogy-based partnership supervision system intended to support a more humane and constructive implementation of academic supervision.

Research Objectives - This study aimed to explore the design and implementation of an andragogy-based partnership supervision system, examine the associated learning outcomes, and develop a supervision model.

Research Methods - The study used a research and development approach adapted into four stages: introduction, design, development, and dissemination. Qualitative data were collected through observation, interviews, and document analysis, while quantitative data were obtained through questionnaires and a one-group pretest-posttest evaluation.

Research Findings - The study produced a system design, documented its implementation, and examined preliminary effectiveness through changes in the knowledge and competence of madrasah principals. The mean academic supervision competency score increased from 18.00 to 51.25, a gain of 33.25 points, reported as approximately 65%.

Conclusion and Research Novelty - The andragogy-based partnership supervision system constitutes an innovative product that can serve as a theoretical and practical reference for academic supervision conducted by madrasah principals.

Keywords: andragogy; partnership; supervision system

How to Cite:

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INTRODUCTION

Academic supervision aims to guide the development of teachers' professional abilities and skills. Glickman et al. (2017) explained that supervision has historically involved the inspection of teachers and has often been viewed as an instrument of control. Holland (2004) concluded that, despite good intentions, teacher evaluation is often characterized by mistrust, unclear goals, and insufficient respect for its process and outcomes. Opportunities for collaboration between supervisors and teachers in the evaluation process are often inadequately addressed in expedited evaluation models (Benigno, 2016). Teachers who receive guidance through supervision can strengthen the knowledge and competence required to perform their professional duties. Academic supervision by madrasah principals is therefore expected to produce positive outcomes. However, many implementation problems continue to prevent supervision from operating optimally. Recent evidence also shows that instructional leadership and sustained professional development support teachers' learning and practice (Bellibaş et al., 2021; He et al., 2024; Popova et al., 2022; Sancar et al., 2021; Sims et al., 2025; Ventista & Brown, 2023).

A literature review identified persistent problems in the implementation of academic supervision in Sumedang Regency. Dian and Prayoga (2019) found that supervision at Madrasah Aliyah Darussalam remained interrogative and that the madrasah principal did not approach teaching staff intensively; consequently, academic supervision provided limited professional development. Madrasah principals also conducted supervision infrequently because routine technical and administrative duties occupied much of their time (Juariyah, 2019). Furthermore, the quality of the learning process related to teachers' role in facilitating students' access to learning materials remained relatively low (Jatnika, 2019).

A preliminary survey was conducted in four public Islamic educational institutions at the primary and secondary levels in Sumedang Regency: Madrasah Ibtidaiyah Negeri 2, Madrasah Tsanawiyah Negeri 1, Madrasah Tsanawiyah Negeri 3, and Madrasah Aliyah Negeri 1. The survey involved 40 respondents and examined challenges in implementing academic supervision. Four main problems emerged: (1) supervision by madrasah principals remained interrogative (77.5%), with principals asking many questions but communicating inadequately; (2) supervision operated primarily as an inspection to identify deficiencies or errors (72.5%) rather than as guidance for improving learning; (3) teachers lacked the confidence to try new practices (67.5%) because principals tended to direct them rather than support innovation; and (4) teachers had little opportunity to analyze weaknesses in their classroom practice (65%) because principals did not approach them intensively. In addition, 63.9% of respondents expected the continuous development of an andragogy-based academic supervision system.

Glickman's theory emphasizes the fundamental function of supervision within the school context. Supervision integrates the separate elements of instructional effectiveness into coordinated whole-school action (Glickman et al., 2017). Effective supervisory practice therefore requires principals to establish respectful interpersonal relationships grounded in mutual respect, trust, and empathy. Supervision should occur in a warm, open, and psychologically safe environment that supports meaningful dialogue. This environment allows teachers to express ideas, emotions, instructional challenges, and proposed improvements without fear of judgment, thereby supporting professional growth and continuous improvement. Such attention to teachers' contexts is also consistent with culturally responsive instructional supervision (Guerra et al., 2022). This collaborative orientation is reinforced by research on professional learning communities, teacher trust, teacher agency, and distributed leadership (Admiraal et al., 2021; Bellibaş & Gümüş, 2023; Polatcan, 2024; Printy & Liu, 2021). Recent studies further indicate that instructional and distributed leadership support teacher professional learning through trust, collaboration, collective efficacy, and commitment (Bektaş et al.,

2022; Dorukbaşı & Cansoy, 2024; Hosseingholizadeh et al., 2023; Liu et al., 2021).

Academic supervision by madrasah principals should guide teachers by recognizing their diverse characteristics and supporting changes in knowledge, attitudes, values, and skills that improve learning quality. Because madrasah principals and teachers are adults, the supervision process should follow principles of adult learning. Adults in this context are individuals who assume social roles and can direct their own learning. Andragogy is the art and science of helping adults learn and rests on six assumptions: the learner's need to know, self-concept, prior experience, readiness to learn, orientation to learning and problem solving, and motivation to learn (Knowles et al., 2005). Current adult-learning literature also emphasizes self-direction, experience, relevance, and active participation (Knapke et al., 2024; Lu et al., 2022; Morris & Rohs, 2021; Yuliani et al., 2024).

To complement the findings of the preliminary survey presented above, the researchers conducted a follow-up survey to examine the implementation of andragogy-based academic supervision and to identify respondents' needs and expectations regarding its application. The survey involved 84 respondents, comprising 80 teachers and 4 principals from four public Islamic educational institutions at the primary and secondary levels that served as the research sites, namely Madrasah Ibtidaiyah Negeri 2, Madrasah Tsanawiyah Negeri 1, Madrasah Tsanawiyah Negeri 3, and Madrasah Aliyah Negeri 1 in Sumedang Regency. The survey findings on the implementation of andragogy-based academic supervision revealed that 50 respondents (60.7%) had never implemented andragogy-based academic supervision, 27 respondents (32.1%) sometimes implemented it, 6 respondents (7.1%) rarely implemented it, and only 1 respondent (1.2%) always implemented andragogy-based academic supervision.

These findings indicate that respondents had generally not implemented andragogy-based academic supervision. Given the problems and expectations identified in the literature and preliminary surveys, madrasahs need an andragogy-based partnership supervision system as an alternative form of academic supervision that incorporates adult-learning assumptions and supports innovation in Islamic educational institutions (Irawan, 2019; Sastradiharja, 2017). Recent nonformal education research similarly emphasizes adaptive learning, human-capital development, and educator competence in community-based settings (Darmawan et al., 2025; Islahi & Nasrin, 2022; Melania et al., 2024; Prasetyo et al., 2024; Sutimin et al., 2025).

METHODS

This study employed the research and development method developed by Borg and Gall (Gall et al., 2003). The research stages were: (1) gathering information, (2) planning, (3) preparing the product design, (4) conducting an initial or limited trial, (5) revising the main product, (6) preparing the operational model, (7) revising the operational product, (8) conducting a broad field trial, and (9) producing the final product. For implementation, these procedures were adapted into four stages: introduction, design, development, and dissemination. Figure 1 presents the research and development process used in this study.

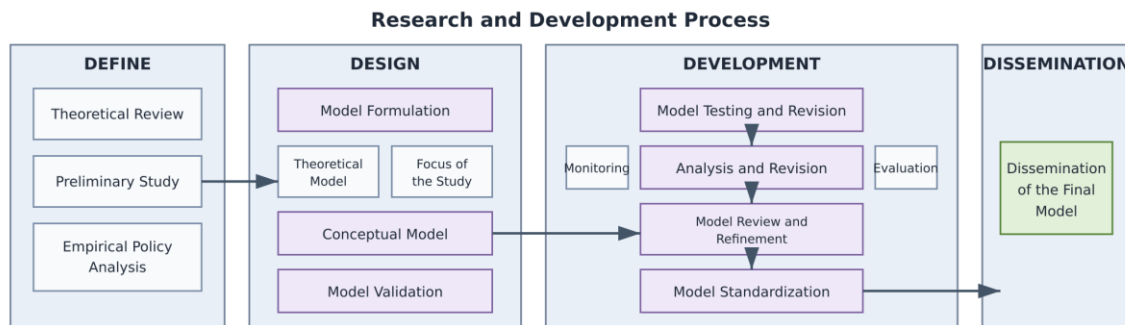


Figure 1. Research and development process

The 4D model, consisting of the Define, Design, Develop, and Disseminate stages, was adopted because it provides a simplified procedural framework suited to this study. The study involved four madrasah principals and 24 teachers as respondents and key information sources. This sample represented the public madrasahs included in the study sites in Sumedang Regency.

The study collected qualitative and quantitative data. Qualitative data were obtained through field observations, structured interviews, and document analysis to examine and describe the implementation of the system comprehensively. Quantitative data were collected through questionnaires to assess preliminary changes associated with system implementation. The study used qualitative and quantitative analyses. Qualitative analysis described and interpreted field data (Lodico et al., 2010) through four stages: (1) data collection, (2) data reduction, (3) data presentation, and (4) verification. Quantitative analysis examined changes in indicators of successful system implementation. It used a one-group pretest-posttest design without a control group and with one intervention (Fraenkel & Wallen, 1993).

RESULTS AND DISCUSSION

Preparing an Andragogy-Based Partnership Supervision System Design

The system-design process began with a literature review and a preliminary survey of the empirical conditions at the research sites. The exploration focused on the problems and expectations of madrasah principals and teachers as adults and as parties directly involved in supervision. Field findings showed that principals continued to conduct inspections and created an interrogative impression by asking questions about weaknesses identified during supervision without allowing teachers to analyze shortcomings in their own learning practices. Limited motivation also discouraged teachers from attempting innovation. This condition conflicts with the purpose of academic supervision, which is to support teacher professionalism, monitor learning quality, and strengthen teachers' work motivation (Daryanto & Rachmawati, 2015).

The next stage involved designing and validating the conceptual system. The design included the rationale, objectives, assumptions, principles, components, success indicators, and procedures. The system combined partnership-based academic supervision with supervision theory and andragogy. Glickman et al. (2017) identified five important features of supervision: (1) collegial rather than hierarchical relationships between teachers and formally designated supervisors; (2) supervision as the responsibility of teachers as well as formally designated supervisors; (3) a focus on teacher growth rather than compliance; (4) facilitation of teacher collaboration for instructional improvement; and (5) continuous teacher involvement in reflective inquiry. These principles informed the system's emphasis on collegial relationships, formal responsibility, teacher development, collaboration, and sustained involvement. The collaborative validation process also reflects evidence that professional development gains strength when facilitators and participants build shared meaning and when program quality is assessed systematically (Richter & Richter, 2024; Warner et al., 2022).

Conceptually, the supervision system incorporated supervision theory as its core and andragogy as an educational intervention framework. The andragogical assumptions included the need to know, self-concept, prior experience, readiness to learn, orientation to learning, and motivation to learn. Experts then assessed the system's substance, construct, and language. The validation involved academics with expertise in andragogy and academic supervision and practitioners consisting of madrasah principals, development supervisors, and the Head of the Sumedang Regency Office of the Ministry of Religious Affairs. Representatives of the dissertation supervisory team from UIN Sunan Gunung Djati Bandung also attended the validation process. Expert validation indicated that the system design was feasible in terms of substance, construct, and language and could proceed to system testing with several revision notes. In addition to language revisions, the experts recommended adding a conditioning stage before the original five stages. The final procedure therefore comprised six stages: conditioning, preparation, equipment procurement, initial activities, implementation, and follow-up.

Conceptual and empirical studies showed that the developed system differed from the academic supervision guidelines used in madrasahs under the Ministry of Religious Affairs in Sumedang Regency. First, the developed system provided a complete structure consisting of a rationale, assumptions, objectives, principles, targets, components, success indicators, and procedures. By contrast, the existing guidelines referred to the Ministry of Religious Affairs' learning supervision guidelines, which did not contain the same conceptual structure (Ministry of Religious Affairs of the Republic of Indonesia, 2021). Second, although both documents included implementation procedures, each stage of the developed system was informed by andragogical assumptions that were absent from the existing madrasah guidelines. Third, the developed system included personal, instrumental, and environmental inputs that were not specified in the existing guidelines. Figure 2 visualizes the developed system model.

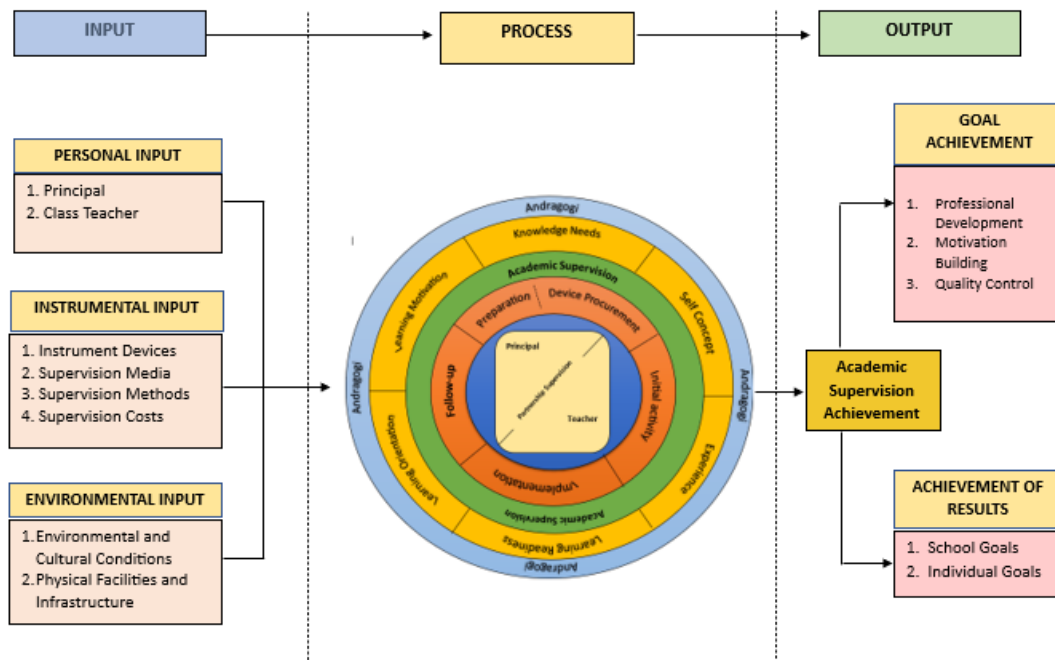


Figure 2. Andragogy-based partnership supervision system

Implementation of an Andragogy-Based Partnership Supervision System

Implementation of the andragogy-based partnership supervision system followed the design stage. The system was implemented continuously through limited and broad trials to produce a comprehensive system aligned with the objectives of academic supervision. The developed system therefore emphasized the following purpose of academic supervision:

Academic supervision helps teachers develop the abilities needed to achieve planned learning goals for their students. It also links individual teacher needs with organizational goals so that school members can work harmoniously toward a shared vision (Glickman et al., 2017). The andragogy-based partnership supervision system aims to help teachers develop their ability to manage the learning process. In this context, supervision connects individual teacher needs with organizational goals so that school members can work together toward a shared vision.

The supervision system was based on six andragogical assumptions: the need to know, self-concept, prior experience, readiness to learn, orientation to learning, and motivation to learn. Madrasah principals implemented the system as supervisors by recognizing teachers' diverse characteristics. The system aimed to strengthen teacher professionalism and improve the quality of academic supervision. At the research sites, the system followed six procedural stages: conditioning, preparation, equipment procurement, initial activities, implementation, and follow-up. The partnership between madrasah principals and teachers generated positive responses and supported improvements in the learning process. Madrasah principals must perform their managerial functions by supervising, coaching, and providing constructive suggestions to teachers (Aqib, 2021). Such partnership requires instructional leaders to prioritize professional learning over administrative routines (Noor & Nawab, 2022). Comparable evidence links principal leadership and professional learning communities with teacher development, self-efficacy, and well-being (Liu et al., 2025; Tran et al., 2021).

The andragogy-based partnership supervision system was implemented in six stages. First, conditioning comprised communication between madrasah principals and teachers regarding supervision plans and schedules, followed by technical explanations of supervision activities. Second, preparation covered cultural, conceptual, personnel, policy, and resource readiness. Third, equipment procurement involved preparing guidelines, activity schedules, supervision instruments, and agendas. Fourth, initial activities comprised system socialization, application of the innovation, and development of a supportive atmosphere. Fifth, full implementation included setting implementation standards, determining activity times, conducting the supervision process, monitoring, and evaluation. Sixth, follow-up and renewal included identifying follow-up actions, measuring the effects of the innovation, and reviewing feedback. Each stage incorporated the six andragogical assumptions. Participation in planning, implementation, monitoring, and evaluation strengthens ownership of community learning initiatives (Neak & Charunkaittikul, 2023). The procedure for implementing the andragogy-based partnership supervision system in madrasah academic supervision is presented in Figure 3.

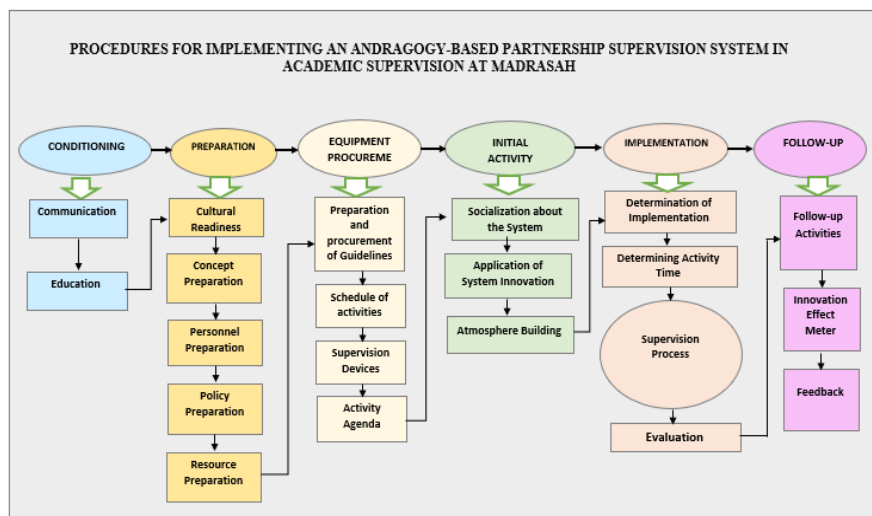


Figure 3. Implementation of the andragogy-based partnership supervision system

Preliminary Effectiveness of the Andragogy-Based Partnership Supervision System

After the andragogy-based partnership supervision system had been formulated and tested, preliminary effectiveness was examined to determine its suitability for wider use and dissemination. Practicality was reflected in two consistent findings: first, the knowledge of madrasah principals and teachers increased after they implemented the system; second, the competence of madrasah principals increased across andragogical indicators. Increased knowledge was measured through pretest and posttest indicators covering: (1) knowledge, (2) interpersonal skills, (3) technical skills, (4) technical tasks, (5) cultural tasks, (6) school goals, and (7) individual goals. The competence of madrasah principles was assessed through six andragogical assumptions: (1) the need to know, (2) self-concept, (3) prior experience, (4) readiness to learn, (5) orientation to learning, and (6) motivation. The model trial used a one-group pretest-posttest design, a pre-experimental design without a control group in which one intervention was administered to the participants.

The evaluation showed higher posttest than pretest scores after system implementation, indicating increased knowledge among madrasah principals and teachers. Figure 4 presents these data.

Descriptive Statistics						
	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pretest	4	16	21	72	18.00	2.160
Posttest	4	49	54	205	51.25	2.217
Valid N (listwise)	4					

Figure 4. Results of the effectiveness evaluation

The mean pretest score was 18.00, indicating the participants' average supervisory performance before implementation. Pretest scores ranged from 16 to 21. The standard deviation was 2.160, indicating relatively limited score variation before implementation. The mean posttest score was 51.25, indicating a substantial increase after implementation. Posttest scores ranged from 49 to 54. The standard deviation was 2.217, again indicating relatively limited variation among participants.

Overall, the comparison shows an increase in the mean score from 18.00 to 51.25. The relatively low standard deviations in both measurements indicate that scores varied within a limited range. All four cases were included in the analysis, with no missing data. A paired-samples t test compared the pretest and posttest mean scores obtained from the same four madrasah principals. Figure 5 presents the results.

Paired Samples Test								
		Paired Differences						Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference		t	
Pair 1	Pretest - Posttest	-33.250	2.062	1.031	Lower	Upper	-32.257	3
					-36.530	-29.970		.000

Figure 5. Results of the paired-samples t test

The paired-samples t test yielded $p < .001$, below the .05 significance level. This result indicates a statistically significant difference between the mean pretest and posttest scores. The null hypothesis was therefore rejected. Within this one-group evaluation, academic supervision scores increased significantly after implementation of the andragogy-based partnership supervision system. Because the study did not include a control group, the result provides preliminary evidence of short-term improvement rather than a definitive causal estimate.

The findings therefore show a significant difference in the academic supervision competency of madrasah principals before and after implementation of the andragogy-based partnership supervision system. The four principals represented public madrasahs at three levels of Islamic education in Sumedang Regency: Madrasah Ibtidaiyah (MI), Madrasah Tsanawiyah (MTs), and Madrasah Aliyah (MA).

Before implementation, the mean academic supervision competency score was 18.00. After implementation, the mean increased to 51.25, a gain of 33.25 points, reported as approximately 65%. These findings indicate that the developed system was associated with improved academic supervision competency among madrasah principals at the MI, MTs, and MA levels in Sumedang Regency. Observations during the limited and broad trials also showed that principals integrated andragogical principles into each stage of the supervision procedures.

The study thus produced an andragogy-based partnership supervision system intended to strengthen the knowledge and skills of madrasah principals and teachers and to improve principals' competence in accordance with andragogical assumptions. The system's feasibility received positive responses from the Head of the Sumedang Regency Office of the Ministry of Religious Affairs, the supervisory working group, the district madrasah teachers' association, madrasah principals, and teachers.

The system's implementation provides a practical approach to strengthening the knowledge of madrasah principals and teachers in three areas: knowledge, interpersonal skills, and technical skills. These areas correspond to the three capabilities required for effective supervision (Glickman et al., 2017). Collaborative engagement can also strengthen learning performance when interaction and participation are structured intentionally (Qureshi et al., 2023).

CONCLUSION

The study developed an andragogy-based partnership supervision system for public madrasahs in Sumedang Regency. The system integrates personal, instrumental, and environmental inputs with six implementation stages: conditioning, preparation, equipment procurement, initial activities, implementation, and follow-up. Each stage applies adult-learning principles and positions principals and teachers as collaborative partners in academic supervision. The one-group evaluation showed increased knowledge among participating principals and teachers and increased academic supervision competence among the four principals. These findings provide preliminary evidence that the system is feasible and is associated with short-term improvement. The model can therefore guide further controlled testing and adaptation in comparable madrasah contexts.

LIMITATIONS

The study used a one-group pretest-posttest design with four principals, no control group, and a short evaluation period. These conditions limit causal inference, generalizability, and assessment of long-term effects. Future studies should use larger samples, comparison groups, validated measures, and longitudinal follow-up.

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