Jurnal Pendidikan Educandum | P-ISSN: 2528-3499 , E-ISSN: 3032-5684| Vol. 06. No. 01 Tahun 2026 | Hal. 110-122

https://ojs.staisdharma.ac.id/index.php/jpe

Integrating Group Discussion Strategies in MI Evaluation Courses To Enhance Metacognition and Critical Thinking Skills of PGMI Students

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DOI : https://doi.org/10.55656/jpe.v6i1.557

Submitted: (2025-11-23) | Revised: (2026-01-05) | Accepted: (2026-01-09) | Online Published: (2026-01-10)

Abstract
This study aims to gain an in-depth understanding of the experiences and internal processes of students in the Islamic Elementary Teacher Education (PGMI) Study Program in developing metacognition and critical thinking through the implementation of group discussion strategies in the Evaluation of Learning course. Using a descriptive phenomenological approach, this study involved 18 PGMI students who actively participated in group discussion sessions. Primary data were collected through in-depth interviews, participatory classroom observations, and document analysis. The data were analyzed thematically to identify core categories and emerging themes. The findings revealed two central themes: first, the externalization of cognitive processes, where group discussions served as a medium for metacognitive awareness, encouraging students to recognize, monitor, and evaluate their own thinking strategies; and second, the enhancement of critical thinking, where differences of opinion within the group triggered constructive socio-cognitive conflicts that prompted students to engage in reflective reasoning and argument evaluation. The study highlights that the quality of social interaction within group discussions plays a crucial role in facilitating the internalization of higher-order cognitive skills among prospective Islamic elementary teachers. Overall, group discussion is shown to be not merely an active learning method but a pedagogical strategy that effectively fosters metacognition and critical thinking, shaping reflective and professional teacher candidates in the PGMI program.
Keywords: : group discussion, metacognition, critical thinking, PGMI Students

Abstrak
Penelitian ini bertujuan untuk memahami secara mendalam pengalaman dan proses internal mahasiswa Program Studi Pendidikan Guru Madrasah Ibtidaiyah (PGMI) dalam mengembangkan metakognisi dan kemampuan berpikir kritis melalui penerapan strategi diskusi kelompok pada mata kuliah *Evaluasi Pembelajaran*. Pendekatan yang digunakan adalah fenomenologi deskriptif dengan partisipan sebanyak 18 mahasiswa PGMI yang aktif mengikuti kegiatan diskusi. Data dikumpulkan melalui wawancara mendalam, observasi

partisipatif selama proses pembelajaran, serta analisis dokumen. Analisis dilakukan secara tematik untuk mengidentifikasi pola, kategori inti, dan makna yang muncul dari pengalaman mahasiswa selama proses diskusi. Hasil penelitian menunjukkan bahwa penerapan strategi diskusi kelompok berpengaruh signifikan terhadap peningkatan kesadaran metakognitif dan kemampuan berpikir kritis mahasiswa. Melalui interaksi reflektif dalam kelompok, mahasiswa belajar mengeksternalisasi proses berpikirnya, memantau strategi belajar yang digunakan, serta melakukan refleksi terhadap efektivitas pengambilan keputusan akademik. Diskusi kelompok juga menciptakan ruang bagi munculnya konflik sosiokognitif yang konstruktif, di mana mahasiswa terdorong untuk mengemukakan argumen secara logis, mengevaluasi pendapat yang berbeda, dan mengambil keputusan berbasis bukti. Proses ini mendorong perkembangan kemampuan analitis, sikap terbuka, dan empati intelektual yang penting bagi pembentukan calon guru yang reflektif dan profesional. Secara keseluruhan, penelitian ini menegaskan bahwa diskusi kelompok bukan sekadar metode pembelajaran aktif, tetapi merupakan strategi pedagogis yang efektif dalam menumbuhkan metakognisi dan berpikir kritis mahasiswa PGMI. Temuan ini menunjukkan bahwa kualitas interaksi sosial, fasilitasi dosen yang reflektif, dan partisipasi kolaboratif mahasiswa menjadi faktor utama dalam menciptakan pembelajaran yang bermakna dan relevan dengan tuntutan profesionalisme guru abad ke-21.
Kata kunci: diskusi kelompok, metakognisi, berfikir kritis, mahasiswa PGMI

INTRODUCTION

The development of education in the 21st century has brought fundamental changes to the paradigm of teacher professionalism. Prospective teachers are no longer required merely to be transmitters of knowledge but must act as reflective professionals capable of analyzing learning situations, making swift and appropriate pedagogical decisions, and conducting self-evaluation based on empirical evidence. Such competence demands not only mastery of theory but also higher-order thinking skills (HOTS), particularly metacognition and critical thinking (Anderson & Krathwohl, 2020; King et al., 2022). In the context of teacher education, these two abilities form the foundation for developing reflective, adaptive, and evidence-based capacities that characterize professional teachers in the modern era.

Metacognition plays a vital role in helping individuals become aware of and regulate their own thinking processes.(Facione P. 2015) defined metacognition as one's knowledge and awareness of their cognitive activities and the ability to monitor and control them. In the context of teacher education, metacognition enables students to plan learning strategies, monitor their implementation, and reflect on the learning process and outcomes (Maor et al. 2023) (Pintrich 2002). PGMI students with high metacognitive awareness consciously review every step in designing learning evaluation instruments, such as questioning the alignment between assessment objectives, the chosen test format, and the skills being measured. For example, when using an essay test, a metacognitively aware student will first assess whether that format is appropriate for measuring students' critical thinking skills or if

a performance-based assessment would be more suitable. Thus, metacognition encourages prospective teachers not only to follow procedures but to understand the meaning and consequences of each decision made during teaching and evaluation.(Crasto et al. 2025)

Metacognition also has an essential regulatory function in evaluative decision-making. This regulation includes the ability to monitor the effectiveness of a strategy, recognize inaccuracies, and make improvements based on self-reflection. A prospective teacher with strong metacognitive regulation can review their assessment instruments by asking, "Does this test item align with my intended learning objectives? Is the language used clear and unambiguous? Does this item measure the intended cognitive domain?" Such reflective questioning is a hallmark of strong metacognitive thinking. After conducting assessments, metacognitive teachers evaluate themselves based on item analysis results, instrument validity and reliability, and reflect on whether their evaluative decisions were effective. This post-task reflection process distinguishes professional teachers from those who merely carry out technical routines (Flavell, 2019; Schraw & Moshman, 2021).

In addition to metacognition, critical thinking skills are crucial in shaping teachers who can think analytically, rationally, and evidence-based. Facione (2015) defines critical thinking as the ability to assess, analyze, infer, and make logical decisions based on valid data. In teacher education, critical thinking functions as an evaluative mechanism for arguments, information, and instructional decisions made during the learning process In the context of the *Madrasah Ibtidaiyah (MI) Learning Evaluation* course, critical thinking skills are essential for assessing the feasibility of assessment instruments, setting mastery criteria, and accurately interpreting student learning outcomes. PGMI students must be able to analyze evaluation data, distinguish errors caused by instruments from those resulting from teaching strategies, and consider the relevance of evaluation results to future instructional improvements (Brookhart, 2019).

However, several studies have shown that critical thinking skills among Indonesian preservice teachers are still at a suboptimal level (Putri & Anwar, 2022; Rahman & Suryana, 2023). Most students still tend to memorize theories without integrating them into professional decision-making. In the PGMI context, this is reflected in students' tendency to develop evaluation instruments procedurally without deeply reflecting on the alignment between learning objectives and the types of assessments used. This indicates a research gap between students' conceptual knowledge of evaluation theory and their reflective ability to apply it critically. The gap is further exacerbated by lecture-based, teacher-centered learning models, which limit students' opportunities to explore, engage in dialogue, and reflect on their thinking processes. Therefore, a learning strategy is needed to bridge the gap between theoretical understanding and reflective ability, one of which is the discussion-based collaborative approach.

Group discussion is an active learning strategy that positions students as subjects in the knowledge construction process. Through discussion, students exchange ideas, test arguments, and solve problems collaboratively. Slavin (2021) explains that group discussions effectively enhance conceptual understanding and stimulate critical thinking skills because students are challenged to defend their opinions with logical and theoretical evidence. During discussions, a constructive *conflict of ideas* occurs, where students must evaluate the strengths of their own and others' arguments. This process not only strengthens critical thinking skills but also trains metacognitive regulation, as students consciously monitor their understanding and adjust their thinking strategies when encountering differing viewpoints.

The theoretical foundation for the effectiveness of group discussions can be explained through Lev Vygotsky's (1978) sociocultural theory, particularly the concept of the Zone of Proximal Development (ZPD). Vygotsky stated that the highest levels of cognitive development occur through social interaction and collaboration with others. Through group discussions, students can achieve more complex levels of understanding aided by social mediation, both from lecturers and peers. This social process provides a medium for internalizing higher mental functions, including metacognitive awareness and critical thinking ability. When students discuss the design of evaluation instruments, they not only learn from theory but also from their peers' diverse perspectives. Such interaction enriches cognitive structures, expands cognitive development zones, and stimulates deep self-reflection (Johnson & Johnson, 2019).

The context of fifth-semester PGMI students is particularly important because, at this stage, they are taking the *Learning Evaluation* course, which serves as a bridge between academic theory and professional practice before their *Field Experience Program (PPL)*. This course requires students to analyze test items, calculate validity and reliability, and design objective assessment instruments suitable for MI students' characteristics. These activities demand not only theoretical mastery but also reflective awareness of the effectiveness of each decision made. Unfortunately, preliminary observations and previous studies indicate that many students still view learning evaluation as merely an administrative task rather than a scientific process for improving instruction (Sari et al. 2024) (AlAli and Al-Barakat 2024). This suggests that their metacognitive awareness and critical thinking skills still need strengthening through reflective and collaborative learning approaches.

Previous studies have mostly focused on the effectiveness of group discussions in improving cognitive learning outcomes, but few have specifically examined their impact on developing metacognition and critical thinking among preservice teachers.(Nuryadi 2024) Therefore, this study offers novelty by integrating group discussion strategies into the MI Evaluation course to stimulate two core skills metacognitive awareness and critical thinking.

This integration emphasizes not only cognitive but also reflective and social aspects intertwined within the collaborative learning process.

Thus, the study titled "*Integration of Group Discussion Strategies in MI Evaluation Learning to Enhance Metacognition and Critical Thinking Skills of PGMI Students*" aims to analyze and describe the effectiveness of group discussions in developing two higher-order thinking skills that underpin teacher professionalism. The study is expected to contribute theoretically to strengthening reflective-collaborative learning models and practically to improving the quality of teacher education in Indonesia. More broadly, the findings are expected to serve as a reference for developing teacher education curricula that integrate cognitive, reflective, and social competencies as the foundation for shaping 21st-century professional teachers.

METHOD

This study employed a qualitative approach with a descriptive research design. This approach was selected because the research aimed to describe and analyze in depth the processes, dynamics, and meanings underlying students learning activities in the context of implementing group discussion strategies in the *Evaluation of Madrasah Ibtidaiyah (MI) Learning* course. A descriptive qualitative approach enables the researcher to explore learning phenomena in their natural settings, understand participants' perceptions and experiences, and interpret how the instructional strategy contributes to the development of students' metacognitive awareness and critical thinking.(Creswell and Creswell 2017)

The research was conducted in the Islamic Elementary Teacher Education (PGMI) Study Program, Faculty of Tarbiyah, Universitas Islam Tribakti (UIT) Lirboyo Kediri. The participants were fifth-semester students enrolled in the *Evaluation of Madrasah Ibtidaiyah Learning* course during the odd semester of the 2025/2026 academic year. The study was carried out over four weeks, from October 25 to November 22, 2025. The site and participants were determined through purposive sampling, considering the students' active engagement in classroom discussions and the relevance of their participation to the research focus.

The qualitative approach was chosen not to generate numerical data or statistical measures, but to obtain an in-depth understanding of students' learning experiences, reflective processes, and cognitive dynamics during group discussions. The primary focus of this research was to explore how group discussion strategies foster metacognitive awareness and critical thinking skills among prospective MI teachers through collaborative and reflective learning activities. Thus, this study sought to uncover the meaning behind actions rather than merely measuring learning outcomes.

Data were collected through three main techniques: participant observation, in-depth interviews, and document analysis. These three methods were employed triangulatively to enhance the validity of the findings.

1. Participant Observation (Moleong 2016)

   Observation was conducted directly in the classroom during the group discussion sessions. The researcher acted as a *participant observer* to comprehend the social context and natural interactions among students. The observation sheet was developed with indicators covering four dimensions of active participation: visual (students' attention and focus), oral (verbal contributions and argumentation), mental (cognitive engagement in analysis and reflection), and emotional (enthusiasm and attitude during interaction). Each dimension was assessed using a qualitative descriptive scale adapted from active learning activity guidelines.

2. In-depth Interviews

   The interview technique was used to explore students' and lecturers' perceptions, experiences, and reflections regarding the implementation of group discussions. Semi-structured interviews were employed to allow flexibility in exploring the emerging meanings during the learning process. The questions focused on how students planned, monitored, and evaluated their thinking processes during discussions, as well as how they perceived the influence of group interactions on their critical thinking development. The course instructor was also interviewed to provide triangulated insights into changes in students' behavior, participation, and reflective engagement.

3. Document and Learning Artifact Analysis

   The analyzed documents included field notes, students' reflective writings, performance rubrics of group discussions, and student assignments in the form of designed evaluation instruments. The analysis of these artifacts was conducted to assess the consistency between observed behaviors and students' produced works, providing a comprehensive picture of their metacognitive and critical thinking abilities.

Data collection was carried out simultaneously with the learning activities to ensure the authenticity and contextual richness of the data. Four main stages: (1) data collection, (2) data reduction, (3) data display, and (4) conclusion drawing and verification.(Miles et al. 2014).

In the data reduction stage, the researcher selected and focused on data relevant to the study's objectives, such as reflective interactions, decision-making processes during discussions, and manifestations of students' critical thinking. In the data display stage, the researcher organized descriptive narratives, observation tables, and representative interview excerpts to support the interpretation of findings. The final conclusion-drawing stage was carried out inductively by interpreting emerging patterns and themes from the entire dataset to answer the research question: how group discussion strategies contribute to the development of metacognition and critical thinking among PGMI students.

To ensure data trustworthiness, the study applied the principles of *credibility, transferability, dependability,* and *confirmability* Credibility was achieved through source and methodological triangulation, comparing results from observations, interviews, and documents. The researcher also conducted member checking by requesting feedback from participants regarding preliminary interpretations to ensure that the meanings captured were consistent with their experiences. Transferability was enhanced by providing rich contextual descriptions of the research setting to allow replication or adaptation in similar contexts. Dependability and confirmability were maintained through a systematic *audit trail* and continuous researcher reflection on potential biases and subjectivity throughout the research process.

The role of the researcher in this study was both instrumental and reflective, serving as the primary instrument in data collection and interpretation. To maintain objectivity and integrity, the researcher engaged in reflexive journaling to record assumptions, preliminary interpretations, and self-reflections during the research process. This reflective approach is essential in educational research, as it allows the researcher to understand the social and psychological dynamics within the learning process while maintaining analytical distance.

With this design and procedure, the study is expected to provide a comprehensive and in-depth portrayal of how group discussion strategies can serve as an effective medium for cultivating metacognitive awareness and critical thinking among PGMI students. Furthermore, this approach reaffirms the role of collaborative learning as a pedagogical strategy that not only enhances academic competence but also shapes reflective and professional teacher identities in accordance with the demands of 21st-century education.

RESULTS AND DISCUSSION

The findings of this study indicate that the implementation of group discussion strategies in the *Madrasah Ibtidaiyah (MI) Evaluation* course has a significant impact on the development of metacognition and critical thinking skills among PGMI students. Through

a collaboratively designed and reflective learning process, students not only participated actively in expressing their opinions but also engaged in deeper cognitive activities—becoming aware of, monitoring, and evaluating their own thinking processes. This engagement demonstrates that group discussion serves as an effective medium for students to externalize internal cognitive processes, thereby enhancing reflective awareness in understanding concepts, assessing arguments, and making academic decisions.

In the context of the learning evaluation course, group discussions functioned as social spaces that encouraged students to articulate their views on concepts such as validity, reliability, and the alignment of assessment instruments with learning objectives. Such interactions stimulated students to re-examine the thinking strategies they employed and to question prior assumptions. This phenomenon reflects a paradigm shift from passive knowledge reception toward active engagement in knowledge construction. The reflective processes that occurred during discussions illustrate students' metacognitive ability to monitor and regulate their cognitive activities, aligning with Flavell's theory of *metacognitive regulation*, which asserts that effective learning is characterized by the learner's capacity to plan, monitor, and evaluate their own thought processes.

Data from interviews and observations further reinforced that students became more aware of the learning strategies they employed. In the early stages of the course, most students admitted that they simply followed the examples of assessment instruments provided by the lecturer without fully understanding the theoretical foundations underlying them. However, after engaging in several rounds of group discussions, students began to question the logic behind the construction of assessment tools, compare alternative evaluation methods, and assess their appropriateness for MI learners. This shift indicates a notable increase in metacognitive awareness, which directly contributes to the quality of students' reflective thinking. They no longer viewed evaluation as a purely technical procedure but as a scientific process requiring logical and ethical considerations.

In addition to enhancing metacognition, group discussions also strengthened students' critical thinking abilities. Throughout the sessions, differences of opinion frequently emerged among group members, particularly when debating the validity of test items or the suitability of assessment methods for specific learning outcomes. These divergences triggered constructive socio-cognitive conflicts, compelling students to provide logical reasoning, seek supporting evidence, and assess arguments based on principles of rationality. This process aligns with Kuhn's concept of *argumentative reasoning*, which posits that critical thinking develops through argumentative practices involving clarification,(Anand et al. 2020) analysis, and evaluation of contrasting viewpoints.

In this context, cognitive conflict did not become destructive; instead, it served as a catalyst for students' intellectual growth. Through healthy debate, students learned to assess

the quality of arguments, identify flaws in reasoning, and cultivate the capacity to accept criticism constructively. This process strengthened dimensions of *open-mindedness* and *intellectual* ***empathy***, which Paul and Elder identify as the foundations of mature critical thinking. In other words, through group discussion, students not only developed logical and analytical reasoning but also learned to be reflective, empathetic, and rational in responding to differences.

Observational data also revealed that the intensity of social interaction within groups greatly influenced the depth of cognitive engagement achieved. Students who participated actively in discussions demonstrated stronger argumentative skills and a more comprehensive understanding of learning evaluation concepts. They began to use technical terms such as *validity*, *reliability*, and *discriminating power* accurately, and they were able to explain the relationship between theory and practice within the MI evaluation context. In some groups, students even connected their discussions to relevant literature, indicating an increased ability to transfer knowledge across contexts. These findings affirm that group discussion activities can create a conducive learning environment for the natural development of higher-order thinking skills (HOTS).

From the perspective of social constructivist theory, the findings illustrate that learning is inherently dialogical and rooted in interpersonal interaction. (Vygotsky and Cole 1978) framework suggests that higher mental functions first emerge through social activity before being internalized into individual consciousness. Within this study, group discussion served as a bridge between social interaction and the formation of reflective awareness. Students learned collaboratively through peer interaction, interpreting experiences, and constructing more complex understandings. Thus, learning through discussion not only enhances cognitive aspects but also helps shape students' academic identity as reflective prospective teachers.

Beyond fostering metacognition and critical thinking, the findings also highlight the crucial role of the lecturer as a facilitator in maintaining the focus and quality of discussion. Lecturers who actively employed guiding questions and reflective feedback effectively encouraged deeper student thinking. Such facilitative approaches created a balance between student autonomy and pedagogical guidance, ensuring that discussions were not merely platforms for opinion-sharing but also meaningful and structured learning processes. The lecturer's ability to manage group dynamics, direct argumentation, and stimulate reflection was found to be a determining factor in the success of this strategy. This finding aligns with Brookfield's view that the principal role of the reflective educator is to create conditions that enable learners to critique their own thinking.

The study also revealed that collaborative learning experiences had positive affective impacts on students' motivation and self-confidence. Group discussions fostered an open

and supportive learning atmosphere in which every student felt valued and contributed meaningfully to group success. This condition strengthened academic responsibility and nurtured social sensitivity—attributes essential to the teaching profession. Over time, such experiences helped students internalize values of professionalism, cooperation, and self-reflection as integral elements of their teacher identity.

Theoretically, these findings reinforce the interdependent relationship between metacognition and critical thinking. Metacognitive awareness enables students to monitor and regulate their thinking processes, while critical thinking guides them in evaluating the quality of those processes. Together, these competencies shape reflective teachers who are capable of making evidence-based instructional decisions. Within the Islamic education context, this is particularly relevant, as MI teachers are expected not only to master pedagogical content but also to possess reflective capacity to assess the effectiveness of their instructional practices. Therefore, developing these two cognitive competencies is not merely an academic goal but a fundamental component of the professional formation of prospective madrasah teachers.

Practically, this research provides important contributions to curriculum development and instructional strategy design within PGMI programs. Integrating structured group discussion strategies into analytically oriented courses can serve as an innovative approach to enhancing students' reflective thinking. Furthermore, the findings can inform Islamic higher education institutions in cultivating a collaborative and reflective academic culture, thereby preparing graduates who are not only technically competent but also adaptive and critically engaged in addressing the challenges of 21st-century education. Discussion-based learning thus emerges not merely as a tool for content mastery but as a transformative space for cultivating scientific reasoning and a professional teaching ethos.

Overall, this study reaffirms that the group discussion strategy is an effective pedagogical approach for fostering metacognition and critical thinking among PGMI students. The collaborative nature of discussion allows students to externalize their cognitive processes, engage reflectively with peers, and develop deeper analytical skills. The socio-cognitive conflicts that arise during discussions act as catalysts for evidence-based and rational critical thinking. The success of this strategy depends on the quality of lecturer facilitation, the dynamics of social interaction, and students' willingness to engage in continuous self-reflection. Thus, group discussion is not merely a teaching method but an intellectual and professional transformation process that plays a pivotal role in shaping reflective, critical, and integrity-driven future madrasah teachers.

CONCLUSION

The findings of this study demonstrate that the implementation of group discussion strategies in the *Evaluation of Learning in Madrasah Ibtidaiyah (MI)* course contributes significantly to the development of metacognition and critical thinking skills among PGMI students. Through a descriptive phenomenological approach, the research reveals that collaborative learning experiences not only enhance students' conceptual understanding but also foster reflective awareness of how they think, learn, and make academic decisions. Two central themes emerged from the analysis, representing the internal processes experienced by students during the implementation of group discussions. The first is the externalization of cognitive processes, in which students are encouraged to articulate their thinking strategies and mechanisms of self-regulation. The discussion functions as a reflective space that allows students to consciously monitor and evaluate their cognitive steps, thereby actively facilitating the growth of metacognitive awareness. This process indicates that metacognition does not develop automatically but is cultivated through structured social interaction and intellectual dialogue.The second theme is critical thinking**,** which evolves through the social dynamics characterized by differences in viewpoints, argumentation, and cognitive conflict among group members. The cognitive disequilibrium that arises prompts students to assess, weigh, and evaluate the validity of arguments based on evidence and logical reasoning rather than subjective opinion. Such interaction creates a learning environment that stimulates analytical, evaluative, and reflective capacities key components in the formation of professional and rational teachers. Therefore, this study affirms that the quality of social interaction within group discussions is a decisive factor in the internalization of higher-order cognitive skills**.** Group discussion is not merely an active learning method but a pedagogical medium that effectively fosters self-awareness, intellectual responsibility, and reflective competence among prospective teachers. Through open and dialogic collaboration, students not only gain a theoretical understanding of educational evaluation but also cultivate the critical, reflective, and adaptive thinking competencies essential for professional madrasah teachers in the context of 21st-century education.

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