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# The Effectiveness of the Problem-Based Learning (PBL) Model in Improving Students' Critical Thinking Skills in the Aqidah Akhlak Subject at Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah

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### **ABSTRACT**

This study aims to evaluate the effectiveness of the Problem-Based Learning (PBL) model in improving the critical thinking skills of fourth-grade students in the Aqidah Akhlak subject at Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah. The research employed a Classroom Action Research (CAR) design conducted in two cycles, each consisting of planning, implementation, observation, and reflection. Data were collected through observation, written tests, and documentation. The findings show that applying the PBL model effectively enhanced students' participation, engagement, and critical thinking abilities. Learning achievement increased from 67.74% in the first cycle to 83.87% in the second cycle, while the average student score improved from 68.06 to 74.83. These results demonstrate that PBL encourages active learning, reflective inquiry, and moral reasoning aligned with Islamic educational values. In conclusion, the Problem-Based Learning model proved effective in improving the quality of Aqidah Akhlak instruction by developing students' analytical and ethical decision-making skills. Therefore, integrating PBL into Islamic elementary education is recommended to strengthen students' moral awareness and critical thinking competence for future challenges.

Keywords: Problem-Based Learning, Classroom Action Research, critical thinking, Aqidah Akhlak, Islamic education

### **ABSTRAK**

Penelitian ini bertujuan untuk mengevaluasi efektivitas model pembelajaran Problem Based Learning (PBL) dalam meningkatkan kemampuan berpikir kritis siswa kelas IV pada mata pelajaran Akidah Akhlak di Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah. Penelitian ini menggunakan desain Penelitian Tindakan Kelas (PTK) yang dilaksanakan dalam dua siklus, masing-masing melalui tahap perencanaan, pelaksanaan, observasi, dan refleksi. Data dikumpulkan melalui observasi, tes tertulis, dan dokumentasi. Hasil penelitian menunjukkan bahwa penerapan model PBL mampu meningkatkan partisipasi, keaktifan, dan kemampuan berpikir kritis siswa secara signifikan. Peningkatan ini terlihat dari ketercapaian tujuan pembelajaran yang meningkat dari 67,74% pada siklus I menjadi 83,87% pada siklus II, serta kenaikan nilai rata-rata siswa dari 68,06 menjadi 74,83. Hasil ini membuktikan bahwa PBL mendorong pembelajaran aktif, berpikir reflektif, serta penalaran moral yang selaras dengan nilai-nilai pendidikan Islam. Dengan demikian, model pembelajaran Problem Based Learning (PBL) terbukti efektif dalam meningkatkan kualitas pembelajaran Akidah Akhlak dengan mengembangkan kemampuan analitis dan pengambilan keputusan moral siswa. Penerapan PBL direkomendasikan sebagai strategi inovatif untuk memperkuat kesadaran moral dan keterampilan berpikir kritis peserta didik di madrasah.

Kata kunci: Problem Based Learning, Penelitian Tindakan Kelas, berpikir kritis, Akidah Akhlak, pendidikan Islam

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### 1. INTRODUCTION

Developing students' critical thinking skills is one of the central goals of modern education, as these abilities are crucial for enabling learners to reason logically, solve problems, and make responsible decisions (Halpern, 2020). Within the framework of Islamic education, critical thinking holds a distinctive significance. It not only involves cognitive analysis but also requires moral reasoning grounded in Islamic ethical values (Huda & Kartanegara, 2020). In subjects such as Aqidah Akhlak, students are encouraged to understand Islamic teachings not merely as doctrinal knowledge, but as a guide to reflective judgment and virtuous behavior in daily life.

However, in many Islamic elementary schools (madrasah ibtidaiyah), including Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah, teaching methods in Aqidah Akhlak remain largely teacher-centered. Learning activities are dominated by lectures, rote memorization, and limited questioning, which constrain students' opportunities to develop their reasoning and analytical abilities (Mahfud & Suyatno, 2020). This traditional approach often leads to surface learning, where students recall religious concepts without connecting them to moral dilemmas or real-world situations (Haris, Basri, & Rahman, 2020). Consequently, Islamic education risks losing its transformative function the cultivation of independent, ethical, and critical thinkers who embody Islamic values in action.

In response to these challenges, innovative learning models are needed to make Islamic education more reflective, participatory, and inquiry-based. One such approach is the Problem-Based Learning (PBL) model, which has been widely recognized as an effective pedagogy for fostering higher-order thinking skills (Savery, 2021; Hmelo-Silver, 2019). PBL emphasizes student engagement through real or simulated problems that require analysis, reasoning, and solution-building. Rather than receiving information passively, learners construct their understanding collaboratively, guided by the teacher as a facilitator (Barrows & Tamblyn, 2022).

When applied to Islamic education, particularly in Aqidah Akhlak, PBL becomes more than a cognitive tool it transforms into a moral reasoning framework. Through carefully designed moral case studies, students can discuss ethical dilemmas, evaluate alternative actions, and arrive at decisions based on Qur'anic principles such as *adl* (justice), *amanah* (trustworthiness), and *ihsan* (excellence) (Riza 2022). This process aligns with the *wasatiyyah* (moderation) approach in Islamic pedagogy, which promotes balance between intellect (*aql*) and faith (*iman*), ensuring that critical inquiry remains anchored in moral integrity (Abdullah, 2021; Albayrak, 2021).

The integration of PBL within Aqidah Akhlak also aligns with constructivist learning theory, which posits that knowledge is actively built through experience and social interaction (Hmelo-Silver, 2019). Students become active participants in their learning, developing the ability to ask questions, explore moral alternatives, and reflect on their decision-making processes. This approach supports the cultivation of metacognitive awareness, a core aspect of critical thinking that enables students to evaluate their own reasoning (Ennis, 2018). Moreover, recent research highlights the importance of contextualizing Islamic education within the framework of 21st-century skills, which include creativity, collaboration, communication, and critical thinking (UNESCO, 2021). Integrating these competencies into Aqidah Akhlak can enhance its relevance for students growing up in the digital era. By adopting models such as PBL, teachers can bridge the gap between traditional religious instruction and modern learning paradigms (Rahman & Yusuf, 2022). This integration encourages students to perceive Islamic values not as abstract ideals but as living principles applicable to ethical challenges in social and technological contexts.

In Indonesia, efforts to reform Islamic education have increasingly emphasized student-centered learning and moral competence development. The Ministry of Religious Affairs (Kementerian Agama Republik Indonesia, 2020) explicitly promotes innovative pedagogical approaches to strengthen the quality of Pendidikan Agama Islam (PAI) in madrasah. Within this policy framework, implementing PBL in Aqidah Akhlak can be seen as a strategic response to the need for transformative learning models that cultivate not only knowledge ('ilm) but also ethical awareness and critical reasoning (fikr).

Thus, this study focuses on examining the effectiveness of the Problem-Based Learning (PBL) model in enhancing the critical thinking skills of fourth-grade students in Aqidah Akhlak at Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah. The study employs a Classroom Action Research (CAR) approach to explore how iterative instructional improvement through PBL can foster students' analytical engagement and moral understanding. It is expected that the findings will contribute to the growing body of literature on Islamic educational innovation, particularly in promoting active, reflective, and values-oriented learning that prepares students to navigate ethical complexities in modern life.

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### 2. Theoretical Framework

# 2.1 Problem-Based Learning (PBL) in Educational Contexts

Problem-Based Learning (PBL) is a learner-centered instructional approach that organizes curriculum and learning around complex, authentic problems (Savery, 2021). Rather than receiving information passively, students learn by investigating and solving problems that mirror real-life contexts. This model is grounded in constructivist learning theory, which posits that knowledge is actively constructed through experience, reflection, and social interaction (Hmelo-Silver, 2019). The teacher functions not as a transmitter of information but as a facilitator who guides inquiry, scaffolds learning, and fosters metacognitive awareness.

PBL encourages students to develop higher-order thinking skills such as analysis, evaluation, and synthesis skills essential for critical and creative reasoning (Barrows & Tamblyn, 2022). These competencies enable learners to identify problems, generate hypotheses, gather and evaluate evidence, and formulate solutions based on logical reasoning. According to Arends and Kilpatrick (2017), the PBL cycle problem presentation, self-directed inquiry, group discussion, and reflection build autonomy and collaboration simultaneously. In Islamic education contexts, PBL offers a pedagogical innovation that aligns with the goal of producing *insan kamil* (the complete human), who combines intellectual competence (*aql*) with moral integrity (*akhlaq*). The integration of problem-solving and reflection in PBL corresponds to the Qur'anic principle of *tafakkur* (deep thinking), which invites believers to reason about divine signs and ethical decisions (Huda & Kartanegara, 2020). Therefore, PBL is not only an effective teaching strategy but also an approach that resonates with the philosophical aims of Islamic pedagogy.

# 2.2 Critical Thinking in Islamic Education

Critical thinking refers to the ability to analyze, evaluate, and synthesize information in order to make reasoned judgments (Ennis, 2018). In modern educational frameworks, it is recognized as a core 21st-century skill necessary for students to engage meaningfully in society (UNESCO, 2021). Within Islamic education, critical thinking takes on a moral and spiritual dimension: it requires not only rational analysis but also alignment with ethical and religious principles (Halpern, 2020; Abdullah, 2021). Islamic scholars have long emphasized *fikr* (reflection) and 'aql (intellect) as foundations for understanding truth. Al-Ghazali, for instance, argued that true knowledge arises from the harmonious integration of reason and revelation, while modern Islamic philosophers interpret critical reasoning as a process of seeking moral clarity and justice (Huda, 2020). Thus, critical thinking in Islamic education entails the ability to reason logically within the ethical boundaries set by divine guidance. In the context of *Aqidah Akhlak*, critical thinking helps students analyze moral dilemmas, interpret religious teachings contextually, and apply ethical reasoning to daily life (Mahfud & Suyatno, 2020). It moves students beyond memorization toward understanding *why* certain actions are considered virtuous or wrong according to Islamic ethics. This form of moral reasoning anchored in reflective inquiry enables learners to internalize Islamic values deeply rather than superficially.

Research indicates that instructional models promoting dialogue, reflection, and problem-solving are effective in cultivating critical thinking in religious education (Rahman & Yusuf, 2022). When students are given the opportunity to question, debate, and analyze moral issues, they develop intellectual humility and discernment, traits that are essential for character formation and civic responsibility. PBL, therefore, provides a pedagogical structure for nurturing these capacities in an Islamic classroom setting.

### 2.3 Agidah Akhlak and Character Formation through PBL

The subject of Aqidah Akhlak occupies a central position in the curriculum of Indonesian madrasahs. It aims to nurture faith (iman), moral character (akhlaq), and social responsibility (ukhuwah insaniyah) among students (Kementerian Agama Republik Indonesia, 2020). In essence, Aqidah Akhlak functions as both a cognitive and affective domain: it transmits theological knowledge while simultaneously shaping ethical behavior and emotional intelligence (Nasir & Sari, 2023). However, traditional methods in Aqidah Akhlak instruction often fail to stimulate critical reflection or practical moral reasoning. Lessons tend to focus on the transmission of moral precepts rather than on helping students understand how to apply them in real situations (Haris et al., 2020). Consequently, the teaching process may achieve conceptual understanding but lacks transformative impact on students' reasoning and decision-making.

Integrating Problem-Based Learning into Aqidah Akhlak instruction provides a viable solution to this pedagogical gap. Through PBL, moral issues can be presented as case-based problems, prompting students to discuss, analyze, and evaluate ethical alternatives. For instance, when faced with a scenario involving honesty versus self-interest, students can examine Qur'anic principles, deliberate collectively, and derive moral decisions through reasoning. This process strengthens both moral cognition and metacognitive awareness, encouraging learners to think deeply about their values and actions (Abdullah, 2021). Furthermore, PBL aligns with the Islamic educational objective of developing independent, reflective learners who are capable of making ethical judgments. It operationalizes the integration of *iman*, 'ilm, and amal faith, knowledge, and practice through experiential learning (Huda et al., 2022). By engaging in inquiry-driven tasks, students do not merely absorb religious values but actively reconstruct them in response to moral challenges. Ultimately, the theoretical connection between PBL, critical thinking, and Aqidah Akhlak suggests that learning should be an active moral enterprise rather than

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a passive reception of knowledge. This framework supports the idea that effective Islamic education combines cognitive reasoning with ethical formation, fostering students who can think critically, act morally, and live responsibly in accordance with Islamic principles.

# 3. Methodology

## 3.1 Research Design

This study employed a Classroom Action Research (CAR) design, which is a systematic, reflective, and iterative process used to improve educational practices in real classroom settings (Kemmis & McTaggart, 2014). CAR allows teachers to identify problems in teaching and learning, implement innovative strategies, and observe their effects through cyclical processes of planning, acting, observing, and reflecting (Mertler, 2019).

The rationale for adopting CAR lies in its practical orientation: it directly engages teachers in improving instructional quality through evidence-based interventions. In this research, the focus was to examine the effectiveness of the Problem-Based Learning (PBL) model in enhancing students' critical thinking skills in the *Aqidah Akhlak* subject at *Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah*. The CAR approach was particularly suitable as it allowed the researcher to collaborate with classroom teachers, adapt instructional design in real time, and document changes in student engagement and performance across two action cycles.

### 3.2 Research Setting and Participants

The study was conducted at *Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah*, an Islamic elementary school under the supervision of the Ministry of Religious Affairs (Kementerian Agama Republik Indonesia). The participants consisted of 28 fourth-grade students (Class IVA) during the 2023/2024 academic year. The selection of participants followed a purposive sampling technique, ensuring that the sample reflected typical classroom conditions for *Aqidah Akhlak* instruction.

The subject of Aqidah Akhlak was chosen due to its dual focus on cognitive understanding and moral reasoning. It provided a relevant context for developing critical thinking and ethical decision-making skills through the PBL model. The classroom teacher acted as a co-researcher, facilitating the instructional intervention while the researcher observed and analyzed classroom dynamics, student responses, and learning outcomes.

### 3.3 Research Procedures

The Classroom Action Research was conducted in two cycles, each comprising four main stages:

### 1. Planning:

During this phase, lesson plans were developed integrating PBL principles into the *Aqidah Akhlak* topic "Moral Responsibility and Honesty." Learning materials were designed around real-life moral dilemmas to encourage discussion and problem-solving. Learning objectives, observation sheets, and assessment instruments were validated by experts before implementation.

### 2. Action (Implementation):

The PBL model was applied according to the following stages (Barrows & Tamblyn, 2022; Savery, 2021):

- 1. Presenting a contextual moral problem.
- 2. Organizing students into small discussion groups.
- 3. Facilitating inquiry and data collection from Islamic sources (Qur'an, Hadith, and examples from daily life).
- 4. Guiding students to propose solutions or moral judgments based on reasoning and evidence.
- 5. Conducting reflection and consolidation of learning outcomes. Each learning session lasted for two 40-minute periods per week.

### 3. Observation:

Data were collected throughout the instructional process to capture students' engagement, participation, and critical reasoning. Observations focused on behavioral indicators of critical thinking such as asking questions, giving arguments, evaluating alternatives, and drawing conclusions (Ennis, 2018).

# 4. Reflection:

After each cycle, the researcher and classroom teacher collaboratively analyzed the results, identified strengths and weaknesses, and planned modifications for the next cycle. Adjustments included refining problem scenarios, varying group tasks, and strengthening reflective questioning techniques to maximize student participation.

### 3.4 Data Collection Techniques

Three primary instruments were used to collect both qualitative and quantitative data:

# 1. Observation Sheets:

Used to monitor student engagement, teacher facilitation, and interaction patterns during PBL activities. Observations were recorded systematically using a Likert-scale rubric.

2. Written Tests (Pre-Test and Post-Test):

These tests assessed students' critical thinking skills, focusing on their ability to identify problems,

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analyze information, provide logical reasoning, and make moral judgments aligned with Islamic teachings.

### 3. Documentation:

Included lesson plans, student work samples, photographs, and reflective journals from both teacher and researcher to support triangulation and provide contextual evidence of learning improvement.

The combination of these instruments ensured data triangulation for enhanced validity and reliability (Denzin, 2012).

# 3.5 Data Analysis

Data analysis in this study followed both quantitative and qualitative procedures.

## 1. Quantitative Data:

The improvement in students' critical thinking skills was measured by comparing pre-test and post-test scores from each cycle. Statistical analysis used percentage gain and mean score comparison to evaluate learning achievement (Creswell & Poth, 2018).

### Qualitative Data:

Qualitative data from observation notes and reflections were analyzed using thematic analysis (Braun & Clarke, 2019). The analysis focused on identifying recurring themes such as student engagement, reasoning quality, collaboration, and teacher facilitation effectiveness.

Interpretations from both datasets were integrated to explain how the PBL model influenced students' critical thinking behaviors and learning experiences.

### 3.6 Validity and Reliability

To ensure the trustworthiness of the research, multiple strategies were applied:

- 1. Triangulation: Data were cross-checked among different instruments (tests, observations, documentation).
- 2. Member Checking: Teachers reviewed and verified interpretations to ensure accuracy.
- 3. Peer Debriefing: Feedback was obtained from fellow educators and academic supervisors.
- 4. Reflection and Audit Trail: Detailed field notes and reflective journals were maintained to document decision-making throughout the research process (Lincoln & Guba, 1985).

These validation measures strengthened the credibility and dependability of the research findings, ensuring that conclusions accurately reflected classroom realities.

# 4. Results and Discussion

### 4.1 Results

The Classroom Action Research (CAR) was conducted in two cycles, each consisting of planning, implementation, observation, and reflection. The research focused on improving the critical thinking skills of fourth-grade students in the *Aqidah Akhlak* subject through the Problem-Based Learning (PBL) model at Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah. In the first cycle, the teacher implemented PBL by introducing moral problems related to honesty and responsibility. Students were divided into small groups to analyze cases, discuss alternative solutions, and formulate decisions based on Islamic values. During this phase, student participation increased moderately; however, some students were still hesitant to express opinions and depended on peers for answers. After analyzing the results of the first cycle, the researcher and teacher made several improvements for the **second cycle**, including providing clearer problem statements, strengthening questioning techniques, and ensuring equitable participation within groups. These adjustments led to greater engagement, deeper discussions, and more independent reasoning among students.

The improvement in students' critical thinking abilities was measured quantitatively using pre-test and post-test scores and qualitatively through classroom observation.

# 1. Quantitative Findings

The results showed a consistent and notable improvement in learning achievement and critical thinking indicators. The percentage of students achieving the minimum mastery level (*Kriteria Ketuntasan Minimal*, KKM) increased from 67.74% in Cycle I to 83.87% in Cycle II. Similarly, the average student score improved from 68.06 to 74.83. These results indicate that the implementation of the PBL model had a significant positive impact on students' learning outcomes and their ability to reason critically.

### 2. Qualitative Findings

Observation data revealed that students became more active, curious, and collaborative. Indicators of critical thinking such as questioning, reasoning, and evaluating evidence were more visible in the second cycle. Students also demonstrated improved confidence in articulating moral judgments during discussions, using Qur'anic references to justify their arguments.

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These improvements align with Hmelo-Silver's (2019) assertion that PBL fosters higher-order cognitive engagement through active inquiry and reflection. By situating learning within meaningful moral contexts, students were encouraged to apply reasoning processes that integrate faith (*iman*) and intellect ('aql)—a hallmark of Islamic educational philosophy (Huda & Kartanegara, 2020).

The findings of this study confirm that Problem-Based Learning (PBL) is an effective strategy for cultivating critical thinking skills in Islamic elementary education. The success of PBL can be attributed to three interrelated aspects: active participation, collaborative learning, and reflective inquiry.

First, active participation allowed students to construct knowledge rather than passively receive it. By analyzing real moral dilemmas, students learned to identify problems, assess alternatives, and justify their choices. This finding is consistent with Savery (2021), who stated that active engagement is central to PBL because it enhances intrinsic motivation and metacognitive regulation.

Second, collaborative learning encouraged peer interaction and the exchange of diverse perspectives. Students learned to respect differing opinions, negotiate ideas, and reach collective conclusions. This cooperative element resonates with Vygotsky's (1978) social constructivist theory, which posits that interaction is essential for cognitive development. In the Islamic context, this reflects the Qur'anic principle of *shura* (consultation), emphasizing dialogue and shared reasoning as means to attain wisdom (Abdullah, 2021).

Third, reflective inquiry enabled students to connect moral principles with real-life experiences. Through guided reflection, learners internalized values such as honesty (amanah), justice (adl), and compassion (rahmah). This aligns with Albayrak's (2021) concept of wasatiyyah (moderation), which promotes balance and ethical discernment in decision-making. Reflection in PBL thus functioned as both a cognitive and spiritual process helping students to understand why a moral action is necessary, not merely what should be done.

Collectively, these aspects demonstrate that PBL creates a learning ecosystem that integrates reasoning, ethics, and collaboration. As a result, students not only enhanced their analytical skills but also developed a moral consciousness rooted in Islamic teachings.

The implementation of PBL in *Aqidah Akhlak* carries broader implications for Islamic educational reform. Traditionally, Islamic learning in Indonesia has been characterized by authoritative teaching, where the teacher's role dominates and students act as passive recipients (Mahfud & Suyatno, 2020). While this approach ensures discipline and respect, it often restricts creative and critical engagement. The success of PBL in this study demonstrates that Islamic education can embrace modern pedagogical innovation without compromising its spiritual essence.

Moreover, integrating PBL aligns with the vision of the Ministry of Religious Affairs (Kementerian Agama RI, 2020) to modernize *madrasah* education through active learning strategies. By promoting inquiry, reasoning, and ethical decision-making, PBL operationalizes the integration of *iman*, '*ilm*, and *amal* (faith, knowledge, and practice). Such integration reflects the holistic philosophy of Islamic education to cultivate learners who think critically, act morally, and contribute positively to society (Huda et al., 2022).

PBL also supports the cultivation of 21st-century competencies in Islamic contexts. According to UNESCO (2021), education in the digital era must empower learners with the skills of critical thinking, collaboration, and communication. The adaptation of PBL within *Aqidah Akhlak* classrooms fulfills this requirement by engaging students in problem-solving that blends intellectual and moral dimensions. It encourages learners to question assumptions, analyze ethical consequences, and apply Islamic values to contemporary social realities. Finally, this study reinforces the idea that Islamic education should not only transmit religious knowledge but also form moral reasoning habits. PBL provides the structure for such transformation by allowing learners to practice ethical deliberation through continuous inquiry and reflection (Halpern, 2020). When students are trained to reason critically within the moral framework of Islam, they become capable of navigating complex social and ethical challenges with both rationality and integrity.

The results of this study are consistent with several prior investigations into the relationship between PBL and critical thinking. Research by Huda, Johari, and Zakaria (2022) found that integrating inquiry-based learning into Islamic education enhances students' moral reflection and cognitive engagement. Similarly, Nasir and Sari (2023) reported that student-centered methods such as PBL significantly improve critical thinking by encouraging moral discussion and contextual reasoning. Additionally, studies in general education confirm that PBL improves metacognitive skills, problem-solving ability, and learner autonomy (Barrows & Tamblyn, 2022; Savery, 2021). What distinguishes the present research is its focus on *Aqidah Akhlak* a subject inherently moral in nature demonstrating that PBL is not only effective for cognitive development but also serves as a vehicle for ethical and spiritual growth. Thus, this study contributes to the existing body of knowledge by providing empirical evidence that PBL can be adapted successfully to Islamic elementary education, fostering a generation of students who are intellectually competent, morally grounded, and socially responsible.

In summary, the findings demonstrate that the Problem-Based Learning model effectively enhances students' critical thinking skills in *Aqidah Akhlak* by fostering active participation, collaboration, and reflection. These outcomes align with theoretical perspectives emphasizing that learning must be both cognitive and ethical. PBL serves as a bridge between traditional Islamic pedagogy and contemporary educational innovation, providing

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an avenue to achieve the dual aims of knowledge acquisition and moral formation. Through its cyclical, reflective process, the Classroom Action Research confirmed that teaching strategies grounded in inquiry and dialogue can transform the classroom into a space of intellectual and spiritual growth. Consequently, the integration of PBL into Islamic education curricula holds significant potential for promoting critical, creative, and morally conscious learners in the 21st century.

# 4.2. Discussion

The Classroom Action Research (CAR) was conducted in two cycles, each consisting of planning, implementation, observation, and reflection. The research focused on improving the critical thinking skills of fourth-grade students in the Aqidah Akhlak subject through the Problem-Based Learning (PBL) model at Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah. In the first cycle, the teacher implemented PBL by introducing moral problems related to honesty and responsibility. Students were divided into small groups to analyze cases, discuss alternative solutions, and formulate decisions based on Islamic values. During this phase, student participation increased moderately; however, some students were still hesitant to express opinions and depended on peers for answers. After analyzing the results of the first cycle, the researcher and teacher made several improvements for the second cycle, including providing clearer problem statements, strengthening questioning techniques, and ensuring equitable participation within groups. These adjustments led to greater engagement, deeper discussions, and more independent reasoning among students.

The improvement in students' critical thinking abilities was measured quantitatively using pre-test and post-test scores and qualitatively through classroom observation. The results showed a consistent and notable improvement in learning achievement and critical thinking indicators. The percentage of students achieving the minimum mastery level (Kriteria Ketuntasan Minimal, KKM) increased from 67.74% in Cycle I to 83.87% in Cycle II. Similarly, the average student score improved from 68.06 to 74.83. These results indicate that the implementation of the PBL model had a significant positive impact on students' learning outcomes and their ability to reason critically.

Observation data revealed that students became more active, curious, and collaborative. Indicators of critical thinking such as questioning, reasoning, and evaluating evidence were more visible in the second cycle. Students also demonstrated improved confidence in articulating moral judgments during discussions, using Qur'anic references to justify their arguments. These improvements align with Hmelo-Silver's (2019) assertion that PBL fosters higher-order cognitive engagement through active inquiry and reflection. By situating learning within meaningful moral contexts, students were encouraged to apply reasoning processes that integrate faith (iman) and intellect ('aql)—a hallmark of Islamic educational philosophy (Huda & Kartanegara, 2020).

The findings of this study confirm that Problem-Based Learning (PBL) is an effective strategy for cultivating critical thinking skills in Islamic elementary education. The success of PBL can be attributed to three interrelated aspects: active participation, collaborative learning, and reflective inquiry. First, active participation allowed students to construct knowledge rather than passively receive it. By analyzing real moral dilemmas, students learned to identify problems, assess alternatives, and justify their choices. This finding is consistent with Savery (2021), who stated that active engagement is central to PBL because it enhances intrinsic motivation and metacognitive regulation. Second, collaborative learning encouraged peer interaction and the exchange of diverse perspectives. Students learned to respect differing opinions, negotiate ideas, and reach collective conclusions. This cooperative element resonates with Vygotsky's (1978) social constructivist theory, which posits that interaction is essential for cognitive development. In the Islamic context, this reflects the Qur'anic principle of shura (consultation), emphasizing dialogue and shared reasoning as means to attain wisdom (Abdullah, 2021). Third, reflective inquiry enabled students to connect moral principles with real-life experiences. Through guided reflection, learners internalized values such as honesty (amanah), justice (adl), and compassion (rahmah). This aligns with Albayrak's (2021) concept of wasatiyyah (moderation), which promotes balance and ethical discernment in decision-making. Reflection in PBL thus functioned as both a cognitive and spiritual processhelping students to understand why a moral action is necessary, not merely what should be done.

Collectively, these aspects demonstrate that PBL creates a learning ecosystem that integrates reasoning, ethics, and collaboration. As a result, students not only enhanced their analytical skills but also developed a moral consciousness rooted in Islamic teachings. The implementation of PBL in *Aqidah Akhlak* carries broader implications for Islamic educational reform. Traditionally, Islamic learning in Indonesia has been characterized by authoritative teaching, where the teacher's role dominates and students act as passive recipients (Mahfud & Suyatno, 2020). While this approach ensures discipline and respect, it often restricts creative and critical engagement. The success of PBL in this study demonstrates that Islamic education can embrace modern pedagogical innovation without compromising its spiritual essence.

Moreover, integrating PBL aligns with the vision of the Ministry of Religious Affairs (Kementerian Agama RI, 2020) to modernize madrasah education through active learning strategies. By promoting inquiry, reasoning, and ethical decision-making, PBL operationalizes the integration of *iman*, *'ilm*, and *amal* (faith, knowledge, and practice). Such integration reflects the holistic philosophy of Islamic education to cultivate

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learners who think critically, act morally, and contribute positively to society (Huda et al., 2022). PBL also supports the cultivation of 21st-century competencies in Islamic contexts. According to UNESCO (2021), education in the digital era must empower learners with the skills of critical thinking, collaboration, and communication. The adaptation of PBL within Aqidah Akhlak classrooms fulfills this requirement by engaging students in problem-solving that blends intellectual and moral dimensions. It encourages learners to question assumptions, analyze ethical consequences, and apply Islamic values to contemporary social realities. Finally, this study reinforces the idea that Islamic education should not only transmit religious knowledge but also form moral reasoning habits. PBL provides the structure for such transformation by allowing learners to practice ethical deliberation through continuous inquiry and reflection (Halpern, 2020). When students are trained to reason critically within the moral framework of Islam, they become capable of navigating complex social and ethical challenges with both rationality and integrity.

The results of this study are consistent with several prior investigations into the relationship between PBL and critical thinking. Research by Huda, Johari, and Zakaria (2022) found that integrating inquiry-based learning into Islamic education enhances students' moral reflection and cognitive engagement. Similarly, Nasir and Sari (2023) reported that student-centered methods such as PBL significantly improve critical thinking by encouraging moral discussion and contextual reasoning. Additionally, studies in general education confirm that PBL improves metacognitive skills, problem-solving ability, and learner autonomy (Barrows & Tamblyn, 2022; Savery, 2021). What distinguishes the present research is its focus on Aqidah Akhlak a subject inherently moral in nature demonstrating that PBL is not only effective for cognitive development but also serves as a vehicle for ethical and spiritual growth. Thus, this study contributes to the existing body of knowledge by providing empirical evidence that PBL can be adapted successfully to Islamic elementary education, fostering a generation of students who are intellectually competent, morally grounded, and socially responsible.

In summary, the findings demonstrate that the Problem-Based Learning model effectively enhances students' critical thinking skills in Aqidah Akhlak by fostering active participation, collaboration, and reflection. These outcomes align with theoretical perspectives emphasizing that learning must be both cognitive and ethical. PBL serves as a bridge between traditional Islamic pedagogy and contemporary educational innovation, providing an avenue to achieve the dual aims of knowledge acquisition and moral formation. Through its cyclical, reflective process, the Classroom Action Research confirmed that teaching strategies grounded in inquiry and dialogue can transform the classroom into a space of intellectual and spiritual growth. Consequently, the integration of PBL into Islamic education curricula holds significant potential for promoting critical, creative, and morally conscious learners in the 21st century.

### 5. CONCLUSION

This study concludes that the Problem-Based Learning (PBL) model is an effective instructional approach for enhancing students' critical thinking skills and moral reasoning in the *Aqidah Akhlak* subject at *Madrasah Ibtidaiyah Negeri (MIN) 1 Aceh Tengah*. By positioning students as active participants in exploring and solving moral problems, PBL shifts the learning process from rote memorization to reflective inquiry. The integration of real-life moral dilemmas allowed learners to analyze, reason, and make ethical judgments guided by Islamic values, thereby strengthening both their cognitive and affective domains. This approach aligns with the holistic philosophy of Islamic education, which seeks to balance faith (*iman*), intellect (*aql*), and moral character (*akhlaq*). The findings further demonstrate that PBL not only improves students' analytical abilities but also cultivates collaboration, curiosity, and ethical awareness. Through structured group discussions and guided reflection, learners developed deeper understanding of moral principles and the ability to apply them contextually. This research reinforces the idea that Islamic education should move beyond traditional didactic methods toward more interactive, student-centered pedagogies that encourage reasoning and dialogue. In doing so, teachers assume the role of facilitators who guide inquiry rather than mere transmitters of religious content, embodying the spirit of *tarbiyah* nurturing the whole person intellectually and spiritually.

Therefore, it is recommended that Problem-Based Learning be integrated systematically into the curriculum of Islamic Religious Education to strengthen students' reasoning and decision-making skills. Teacher professional development should emphasize designing and facilitating inquiry-based lessons that connect moral concepts to students' real-life experiences. Educational policymakers and school leaders are encouraged to provide institutional support, such as training and collaborative planning sessions, to ensure the sustainability of PBL practices. By harmonizing Islamic ethical foundations with modern pedagogical innovation, PBL can serve as a bridge between tradition and transformation preparing learners to think critically, act ethically, and contribute meaningfully to society in the 21st century.

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