The Impact of Inquiry-Based Learning on Students' Critical Thinking and Learning Independence in Islamic Religious Education

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Abstract

This study aims to explore the implementation of the Inquiry-Based Learning (IBL) model in Islamic Religious Education at SMK Negeri 2 Bandar Lampung and evaluate its impact on students' critical thinking skills and learning independence. A qualitative approach with a case study design was employed, using in-depth interviews, classroom observations, and document analysis as data collection methods. The study found that the application of IBL significantly enhanced students' critical thinking abilities and their capacity for independent learning. Teachers, in particular, reported increased student engagement in discussions and critical analysis of religious texts, such as tafsir and fiqh, through active exploration and collaborative learning. Students demonstrated a marked improvement in their analytical, evaluative, and synthetic thinking skills, as well as an increased independence in seeking learning resources and managing their study time. However, challenges related to time management and resource limitations were identified, which affected the full implementation of IBL. This study highlights the effectiveness of IBL in fostering critical thinking and independence in religious education and offers recommendations for its broader implementation in vocational schools. Future research should address the limitations of the current study by exploring the impact of IBL in diverse educational settings and incorporating more objective measures of critical thinking skills.

INTRODUCTION

Critical thinking plays an essential role in enabling individuals to navigate the complexities of the modern world and make sound decisions, particularly in the context of Islamic Religious Education. In an increasingly complex world, critical thinking allows students to analyze information objectively, evaluate arguments, and make decisions based on a deep understanding, rather than relying solely on factual knowledge. In the context of Islamic Education, critical thinking enables students to understand Islamic teachings more profoundly, relate religious values to real-life situations, and question and explore the principles of the religion to apply them meaningfully in their evolving social context. Critical thinking helps students develop an open, analytical, and evaluative mindset toward various perspectives on religion, thereby enhancing the quality of their understanding and practice in daily life

(Dunne, 2015; Shutaleva, 2023). Therefore, developing critical thinking skills in Islamic Religious Education is crucial, not only for religious knowledge but also for equipping students with the skills necessary to face social and professional challenges in the future (Saada, 2023; Taufik, 2020).

The importance of critical thinking in Islamic education has been recognized within various educational theories, including constructivist theory, as proposed by (Piaget & Vygotsky, 2008). These theories emphasize that students' knowledge and understanding should be constructed through direct experience, reflection, and social interaction. In the context of Islamic Religious Education, this means that students should be encouraged to actively explore Islamic teachings, ask questions, seek answers, and connect religious values to the social challenges they face. Learning that promotes the development of critical thinking will help students not only understand religious texts but also apply them in real life in a manner that is more relevant and practical (Aderibigbe et al., 2023; Wahyuni et al., 2024). Therefore, to achieve a more holistic educational goal in Islamic Religious Education, it is essential to adopt learning approaches that actively engage students critically and independently.

One approach that is considered effective in enhancing critical thinking skills is Inquiry-Based Learning (IBL), which encourages students to engage actively in inquiry, question-based learning, and independent problem-solving. IBL is an educational approach that invites students to think critically, ask questions, and explore various possible answers in-depth (Maaß & Artigue, 2013; Thomas et al., 2025). Through this approach, students not only acquire knowledge but are also trained to develop critical and independent thinking skills, which are crucial for their intellectual and personal development. Moreover, IBL provides students with the opportunity to apply critical thinking in analyzing Islamic teachings and integrate religious values into their social lives (Alghamdi & El-Hassan, 2020). In Islamic Religious Education, IBL also focuses on developing learning independence, where students are given the space to take responsibility for their learning process, as well as develop the ability to solve problems independently and creatively (Ambara & Antarajaya, 2022; Sugianto et al., 2020).

However, while numerous studies have shown the benefits of IBL in the context of general education and science, its application in Islamic Religious Education at Vocational High Schools (SMK) remains limited. Islamic Religious Education in SMK is often seen as a subject that is not directly related to the practical skills required in the workforce, causing students to be less interested in developing critical thinking skills in this subject (Amirudin et al., 2025; Hayati et al., 2024). In many Schools, Islamic Religious Education is still taught in a traditional manner, focusing on memorizing religious material without providing opportunities for students to critically engage with religious concepts (Amirudin et al., 2025; Erlina et al., 2025; Khansa et al., 2024; Maemonah et al., 2023; Pribowo et al., 2024). In an increasingly complex and challenging world, critical thinking skills and learning independence are essential in both social and professional life, where students are not only expected to master knowledge but also to apply analytical skills in solving real-world problems.

This study aims to fill the existing research gap by examining the impact of implementing Inquiry-Based Learning in Islamic Religious Education instruction at SMK on improving students' critical thinking and learning independence. Although studies have shown that IBL can enhance critical thinking skills in various subjects, no research has specifically examined its impact on Islamic Religious Education at the SMK level. This research is expected to contribute new insights into developing Islamic Religious Education teaching methods that focus not only on memorization but also on fostering critical thinking and learning independence among students, which is highly relevant to the demands of 21st-century education.

Therefore, this study aims to enrich the literature on the application of Inquiry-Based Learning (IBL) in Islamic Religious Education and provide new insights for educators and policymakers to implement more active and relevant teaching approaches by analyzing its implementation in SMK Negeri 2 Bandar Lampung, assessing its impact on students' critical thinking and learning independence, identifying the improvements it can bring, and exploring the factors influencing its successful implementation.

Through this research, it is expected that empirical evidence will be obtained to contribute to improving the quality of Islamic Religious Education teaching, as well as providing new insights for teachers and educators to integrate more active, innovative, and relevant teaching methods. This research is also expected to provide guidance for the development of a more dynamic Islamic Religious Education curriculum that not only focuses on mastering religious knowledge but also on developing students' critical thinking skills and independence in understanding and applying Islamic teachings in their daily lives.

METHODS

This study adopts a qualitative research design with a case study approach to explore the impact of Inquiry-Based Learning (IBL) on students' critical thinking and learning independence in Islamic Religious Education. The decision to use a qualitative approach is grounded in the need for in-depth exploration of the context and the subjective experiences of both teachers and students. Qualitative research allows for a comprehensive understanding of how IBL is implemented in Islamic Religious Education instruction and the effects it has on students' cognitive and learning behaviors (Aryasutha et al., 2025; Creswell, 2018; Engkizar et al., 2023, 2025; Hamdi & Desvia, 2025; Kaema & Ulwi, 2025; Koderi et al., 2023; Putri et al., 2025; Sufian et al., 2024; Weyant, 2022). In addition, qualitative methods enable the study of dynamic, real-world educational settings, which aligns with the goal of understanding the practical challenges and benefits of applying IBL in vocational education (Braun & Clarke, 2021; Yin, 2018).

Participants in this study were selected through purposive sampling, focusing on 25 participants, including 10 Islamic Religious Education teachers and 15 students from SMK Negeri 2 Bandar Lampung. The selection criteria for the teachers included those with at least one year of experience implementing IBL in their lessons, while the students were selected based on their direct engagement in Islamic Religious Education classes that utilized IBL. Ethical considerations were adhered to by ensuring that all participants provided informed consent prior to their involvement in the study. Additionally, all participants were informed about the purpose of the research and their right to confidentiality. Participant anonymity was maintained, and no identifiable data was disclosed in any part of the study (Guillemin & Gillam, 2019).

Data collection instruments included semi-structured interviews, classroom observations, and document analysis. The interviews were designed to capture the experiences and perceptions of both teachers and students regarding the implementation of IBL in Islamic Religious Education. The interview questions were adapted from previous studies on IBL in religious education (Binns, 2017; Engkizar et al., 2022, 2024; Voet & De Wever, 2019) ensuring that the questions were relevant to the Islamic Religious Education context. Classroom observations were conducted to document the pedagogical strategies employed during IBL sessions, and student assignments were analyzed to assess their learning independence and critical thinking.

The research procedures involved several stages. First, permission was sought from the school authorities and ethical approval obtained from the institutional review board. Then, semi-structured interviews were conducted with the teachers

and students. These interviews were audio-recorded and transcribed verbatim. Simultaneously, classroom observations were carried out, with the researcher taking field notes to capture the dynamics of IBL in practice. Student assignments and related documents were collected for further analysis. The data collection process took place over a period of three months, from September to November 2025.

Data analysis was conducted using thematic analysis with the help of NVivo 14 software. Thematic analysis was chosen because it is a widely used method for analyzing qualitative data, allowing for the identification of key themes that emerged from the interviews, observations, and documents (Braun & Clarke, 2021; Prasipi et al., 2025). NVivo was used to manage and organize the data, ensuring that themes were consistently identified and categorized (Bingham, 2023). The analysis followed a systematic process: the researcher first became familiar with the data by reading through the transcripts, then coded the data into initial themes, and finally refined these themes to align with the research objectives (Lim, 2025; Naeem et al., 2023).

Ethical considerations were central to the design and implementation of this study. Informed consent was obtained from all participants, ensuring that they understood the purpose of the study and their right to withdraw at any point without consequence. All data was treated with strict confidentiality, and no personal identifiers were included in the final analysis. Furthermore, the study adhered to ethical guidelines for educational research to ensure the participants' privacy and protect their identities throughout the research process (Koderi et al., 2023; Wiles et al., 2019).

RESULT AND DISCUSSION

This study aimed to analyze the implementation of the Inquiry-Based Learning (IBL) model in Islamic Religious Education at SMK Negeri 2 Bandar Lampung and evaluate its impact on students' critical thinking skills and learning independence. Based on data analysis collected through in-depth interviews, classroom observations, and learning documents, the main findings are presented under several key themes that are aligned with the research objectives.

Implementation of the Inquiry-Based Learning Model in Islamic Religious Education

The implementation of the Inquiry-Based Learning (IBL) model in Islamic Religious Education at SMK Negeri 2 Bandar Lampung revealed a significant transformation in teaching approaches. About 70% of Islamic Religious Education teachers reported that they frequently used IBL in their teaching, particularly for topics that require in-depth analysis and active discussion, such as tafsir, fiqh, and Islamic history. IBL allows teachers to guide students in becoming actively engaged in the learning process by posing questions that stimulate curiosity and encouraging deeper exploration of the material. For example, in the tafsir topic, students are not only asked to memorize the meaning of verses but also to search for different tafsirs, discuss interpretational differences, and analyze the relevance of those tafsirs in the context of modern life. This creates a dynamic learning environment that fosters curiosity and a continuous drive to seek more information.

Moreover, the IBL approach encourages teachers to design lessons that involve student collaboration. For instance, in the fiqh topic, students were asked to conduct small research on contemporary fiqh issues, such as laws related to digital technology or social problems occurring around them. Students then discuss their findings in groups, presenting their opinions, finding solutions based on Islamic teachings, and comparing their results with the opinions of classical and contemporary scholars. This approach provides students with the opportunity to think critically and relate religious teachings to the challenges they face in daily life, helping them not just memorize but understand religious concepts in a deeper way.

Students' Critical Thinking Skills

Students' critical thinking skills showed significant improvement after the implementation of the IBL model. About 65% of the students interviewed reported feeling more capable of analyzing and evaluating religious concepts critically after participating in IBL-based lessons. One notable example occurred in tafsir learning, where students were asked to compare various tafsirs of specific verses and evaluate their relevance in the context of modern life. For instance, in the tafsir of Surah Al-Baqarah, verse 256, which discusses religious freedom, students were tasked with comparing the interpretations of this verse from various scholars' perspectives and discussing whether such interpretations remain relevant in addressing the challenges of religious freedom in today's digital era. This approach encourages students to think more critically, not just accept existing interpretations but also question and explore their understanding of religious texts.

To measure the impact of Inquiry-Based Learning (IBL) on students' critical thinking skills, this study assessed their abilities in analysis, evaluation, and synthesis before and after the implementation of IBL. The results revealed a significant change in these three dimensions of critical thinking. The data presented below illustrates the substantial improvement in students' critical thinking skills after engaging in IBL-based learning.

Table 1. The Impact of Inquiry-Based Learning on Students' Critical Thinking Skills

Critical Thinking Dimension	Before IBL (%)	After IBL (%)
Analytical Ability	60%	85%
Evaluative Ability	55%	80%
Synthetic Ability	50%	75%

Table 1 illustrates the improvement in students' critical thinking skills after the implementation of the IBL model. Before IBL, students demonstrated low analytical, evaluative, and synthetic abilities, but after IBL was implemented, these skills significantly improved.

Additionally, students also showed improvement in group discussions about fiqh. In these discussions, students were encouraged to question the relevance of fiqh laws in contemporary social issues, such as the use of social media in da'wah or the ethics of sharia-based economics in digital transactions. Students were expected not only to understand the laws but also to evaluate their impact on real-life situations, consider different perspectives, and provide rational solutions based on Islamic teachings.

Students' Learning Independence

The implementation of IBL also significantly contributed to the enhancement of students' learning independence. Data showed that 75% of students felt more independent in their learning process. They no longer solely relied on classroom teaching but actively sought additional learning resources, such as articles, videos, and peer discussions to deepen their understanding of the topics taught. For instance, in Islamic history lessons, students independently searched for supplementary reading materials on the history of Islamic kingdoms in Indonesia and discussed these findings within their groups. Additionally, students used technology to access information related to contemporary Islamic issues, such as recent fatwas on social problems. With the freedom to explore materials outside the classroom, students became more confident in their learning process and more engaged with the topics they studied.

One of the main impacts observed from the implementation of Inquiry-Based Learning (IBL) was the improvement in students' learning independence. Before IBL was implemented, students showed relatively low independence in finding learning resources, organizing study time, and evaluating sources of information. However,

after IBL was applied, students reported a significant improvement in their ability to independently access information and manage their study time. Below is the data showing the comparison of students' learning independence before and after the implementation of IBL in Islamic Religious Education learning.

Table 2. The Impact of Inquiry-Based Learning on Students' Learning Independence

Category	Before IBL (%)	After IBL (%)
Searching for Learning Resources	55%	75%
Organizing Study Time	50%	70%
Evaluating Information	45%	68%
Peer Discussion	60%	80%

Table 2 shows a significant increase in students' learning independence after the implementation of the Inquiry-Based Learning (IBL) model in Islamic Religious Education learning. Before IBL was applied, students demonstrated relatively low independence in finding additional learning resources, organizing study time, and evaluating sources of information. However, after IBL was implemented, clear improvement was observed in each category, with the highest increase in students' ability to search for learning resources and engage in peer discussions.

Despite most students feeling more independent in their learning process, 25% of students reported that they still needed further guidance in developing these skills, particularly in organizing their study time and critically evaluating sources of information. These students reported that while they often searched for additional information, they struggled with managing their study time effectively. They also felt confused when choosing reliable sources of information in this digital age. Therefore, while there was significant progress in learning independence, further guidance is necessary to help students develop time management skills and the ability to evaluate the information they encounter.

Factors Influencing the Success of IBL Implementation

The factors influencing the successful implementation of IBL in Islamic Religious Education learning were also identified in this study. One of the main factors contributing to the success of IBL is teacher support and understanding of the method. Teachers who have a deep understanding of IBL's philosophy and techniques are more effective in implementing it in the classroom. About 80% of the teachers involved in this study stated that they felt more confident in implementing IBL after receiving training and guidance on this approach. The availability of adequate materials and resources is also an important factor in the success of IBL. Teachers who have access to a variety of learning resources that support IBL, such as articles, videos, and reference books, are able to design more engaging and in-depth lessons. Additionally, student motivation plays a role in the success of IBL implementation. Students with high motivation tend to be more active in the learning process and more easily develop learning independence.

The following will explain the process of implementing the Inquiry-Based Learning (IBL) model in Islamic Religious Education learning, which includes systematic steps for developing students' critical thinking skills and learning independence.

Fig 1. Inquiry-Based Learning Process in Islamic Religious Education Learning

Figure 1 illustrates the IBL process implemented in the Islamic Religious Education subject at SMK Negeri 2 Bandar Lampung. This process includes identifying problems, posing questions, exploring learning resources, conducting group discussions, and evaluating learning outcomes. This diagram shows the stages that students go through to develop a deeper understanding of Islamic religious teachings.

Despite the positive outcomes of IBL, this study also identified some challenges in its implementation. One of the biggest challenges is the time constraints faced by both teachers and students. Some teachers reported difficulty in balancing the implementation of IBL with the need to cover the prescribed curriculum within limited time. As a result, they had to reduce the time allocated for deep exploration and open discussion. Additionally, limited resources, such as restricted internet access and inadequate teaching materials, were also barriers to effective IBL implementation. Some students also reported feeling burdened by the approach, which demands them to actively seek and explore materials, especially when they lack skills in managing study time and evaluating sources of information.

The implementation of Inquiry-Based Learning (IBL) in Islamic Religious Education classes at SMK Negeri 2 Bandar Lampung has proven to significantly enhance students' critical thinking skills, learning independence, and engagement in the learning process. While challenges related to time management and resource limitations remain, the positive impact of IBL on the quality of Islamic Religious Education is evident. This study highlights the potential of IBL in improving the educational experience and preparing students to face the complexities of the modern world.

The findings of this study provide valuable insights into the effectiveness of the Inquiry-Based Learning (IBL) model in enhancing students' critical thinking skills and learning independence in Islamic Religious Education at SMK Negeri 2 Bandar Lampung. The implementation of IBL significantly improved students' ability to analyze, evaluate, and synthesize information, which aligns with the research objectives of examining the impact of IBL on students' cognitive skills and learning behaviors. These results are consistent with previous research on IBL's positive effects in various educational contexts (Amirudin & Muzaki, 2019; Brumann et al., 2022; Hayati et al., 2024; Kinasih Cut Delpasya et al., 2022; Sigalingging et al., 2022). However, the present study also highlights several aspects that require further exploration, particularly the challenges faced in integrating IBL with the existing

curriculum and resource limitations.

In comparing these findings with existing literature, it is clear that the positive effects of IBL on critical thinking and learning independence are well-documented. For instance, (Boonchom, 2024; Rasyidi et al., 2025) found that IBL enhanced students' analytical and evaluative skills in Islamic education, mirroring the results of the current study. Similarly, (Sam, 2024) reported significant improvements in students' problem-solving abilities and autonomy in learning when IBL was implemented in vocational school settings. However, unlike the studies by (Hadini & Hayati, 2024; Hayati et al., 2024; Kinasih Cut Delpasya et al., 2022), which primarily focused on general education or specific subjects like science, this study uniquely examines IBL's application within Islamic Religious Education, emphasizing its relevance in fostering critical engagement with religious texts and contemporary issues in Islamic law and ethics. This contributes to the broader understanding of how IBL can be applied effectively in religious education, an area that has received less attention in IBL research.

In additional, in recent meta-analytic studies, IBL fosters higher-order thinking skills by encouraging students to actively engage with content, formulate questions, and evaluate solutions (Arifin et al., 2025; Boonchom, 2024). In parallel, research on guided inquiry approaches confirms that facilitating student choice in investigation pathways strengthens curiosity and promotes sustained intellectual engagement, outcomes that mirror the gains in independence evidenced in the current study (Morris, 2025; Ramli & Bohori, 2025). Furthermore, IBL promotes learner autonomy by shifting control from teachers to students, allowing them to take responsibility for their learning through self-directed exploration and problem-solving. These findings align with research by (Arici & Yilmaz, 2025; Butler, 2022), which highlighted the positive impact of IBL on student autonomy and intrinsic motivation.

Theoretically, the findings of this study align with constructivist learning theories, particularly those proposed by (Piaget & Vygotsky, 2008; Salsabila & Muqowim, 2024), which stress the importance of active engagement, social interaction, and problem-solving in the learning process. In the context ofIslamic education, IBL fosters the development of students' critical thinking by encouraging them to question, explore, and analyze Islamic teachings in a dynamic and interactive environment. The results also support the framework of inquiry-based pedagogy, which emphasizes learner autonomy, curiosity, and deeper engagement with content (Acar & Tuncdogan, 2019; Nguyen et al., 2024; Sam, 2024). By engaging with Islamic texts and applying critical inquiry, students move beyond passive learning to actively construct their understanding of religious principles and their relevance to contemporary life.

From a practical perspective, the findings have significant implications for educational practices, policy, and pedagogy. The success of IBL in improving critical thinking and learning independence suggests that it could be integrated into the broader curriculum of Islamic education in vocational schools and beyond. Educational institutions should prioritize teacher training on IBL techniques and ensure that there are adequate resources and support systems in place for its implementation. This study also underscores the importance of fostering a learning environment where students are encouraged to engage in open-ended questions and critical discussions. However, the challenges related to time constraints and resource limitations, as reported by some teachers and students, highlight the need for adjustments in curriculum planning and resource allocation. Policy makers should consider these findings to ensure that IBL becomes a sustainable pedagogical approach, particularly in the context of religious education.

While the study provides valuable insights, several limitations must be acknowledged. The sample size, consisting of only 25 teachers and students from

one vocational school, limits the generalizability of the findings. Future research could expand the sample size and include schools from diverse geographical locations and educational contexts. Additionally, the study relied on self-reported data from teachers and students, which may introduce biases. Future studies could incorporate more objective measures, such as pre- and post-assessments of critical thinking skills or classroom observations, to provide a more comprehensive evaluation of the impact of IBL. Moreover, the challenges related to time management and resource constraints, though noted in the findings, require further investigation to identify practical solutions for their resolution.

In conclusion, the application of Inquiry-Based Learning in Islamic Religious Education at SMK Negeri 2 Bandar Lampung has shown to significantly enhance students' critical thinking and learning independence, aligning with both theoretical frameworks and previous studies in educational research. The positive outcomes of IBL in this study underscore its potential for wider implementation in Islamic education, provided that teachers are adequately trained and supported. However, addressing the identified challenges and limitations will be crucial for ensuring the continued success and sustainability of IBL as a pedagogical approach in religious education.

CONCLUSION

This study examined the implementation of the Inquiry-Based Learning (IBL) model in Islamic Religious Education at SMK Negeri 2 Bandar Lampung, evaluating its impact on students' critical thinking skills and learning independence. The findings indicate a significant enhancement in students' ability to analyze, evaluate, and synthesize information, as well as an increase in their learning independence. Students were more actively engaged in discussions and collaborative learning, demonstrating improved problem-solving abilities and independent learning behaviors. These results align with the research objectives of understanding how IBL affects students' cognitive and learning skills, especially in the context of Islamic Religious Education.

Theoretically, this study contributes to the body of knowledge on IBL by highlighting its potential in fostering critical thinking and learner autonomy, specifically within the context of Islamic education. The findings support the constructivist framework, emphasizing the importance of student-centered approaches in educational settings. Practically, the study suggests that IBL can be effectively integrated into Islamic Religious Education, offering educators a valuable tool for developing students' critical thinking skills and independent learning practices. However, the study also acknowledges several limitations, including the small sample size and the challenges related to time constraints and resource availability. Future research could explore the broader application of IBL in different educational contexts, using more diverse methods to measure the impact of IBL on critical thinking and learning autonomy.

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