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Utilization of Generative AI in Islamic Religious Education in the Digital Era: A Qualitative Study at SMAIT Asy-Syukriyyah

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Abstract

The development of generative artificial intelligence (GenAI) in education presents both opportunities and challenges for Islamic Religious Education (IRE), particularly in its use as a supplementary learning resource, support for critical thinking, verification of religious information, and promotion of academic integrity. This study aims to describe how GenAI is used in IRE at SMAIT Asy-Syukriyyah, analyze its benefits and limitations, examine its contribution to critical thinking and learner autonomy, and identify approaches to verifying religious information, the role of teachers, and the ethical dimensions of its use. The study employed a qualitative approach using a case study design. Data were collected through interviews, classroom observations, and documentation, and analyzed thematically through coding, categorization, theme development, and interpretation. The findings indicate that GenAI is used to explore learning materials, obtain alternative information, formulate questions, and support learning activities. Its use also involves comparing information, analyzing and explaining AI-generated content, and verifying sources, particularly when dealing with religious materials. Teachers act as facilitators, guides, and validators, while students serve as both users and evaluators of AI-generated information. These findings suggest that the use of GenAI in IRE should be guided by pedagogical support, rigorous information verification, AI literacy, and the promotion of academic honesty and responsibility.

Keywords: Generative AI; Islamic Religious Education; Digital Learning; Critical Thinking; Academic Integrity

Introduction

The development of Generative Artificial Intelligence (Generative AI) has transformed how students acquire, process, and use information in the learning process, including in Islamic Religious Education (IRE). Generative AI can be used to generate explanations, develop learning materials, formulate questions, provide alternative information, and support more adaptive

learning activities, giving this technology the potential to serve as a supplementary learning tool. In the context of IRE, however, its use has distinctive characteristics because learning involves not only the acquisition of information but also the development of students' thinking skills, values, morals, and religious understanding (Najwa et.al., 2026). Studies on the use of Generative AI in Islamic education indicate that this technology can help provide learning materials and activities, but it also raises concerns about dependency, inaccurate religious information, academic integrity, and the potential decline in students' cognitive engagement when AI is used uncritically (Udhma & Burhanuddin, 2025).

The academic issue, therefore, is not simply whether Generative AI can be used in learning, but how its use can be guided so that it does not replace students' thinking processes or undermine teachers' pedagogical authority. Research in the context of IRE indicates that students may use AI to obtain answers quickly, while use without adequate evaluation may encourage passive acceptance of information and dependence on AI-generated outputs (Nyla, 2026). This issue becomes particularly important when AI is used to discuss religious knowledge, because generative systems can produce explanations that appear convincing but still require verification against relevant sources and established scholarly authorities (Hamidalloh et al., 2026); (Shobri & Alfurqan, 2026). Recent literature also highlights the need to address tabayyun, or verification, AI literacy, academic integrity, and the preservation of teachers' roles in guiding the learning process when AI is used in IRE (Ibrohim et al., 2026). Accordingly, there is a need for empirical research into how Generative AI is used in school-based IRE learning, particularly how the technology is applied, how students process its outputs, how religious information is verified, and how teachers oversee the pedagogical and ethical dimensions of its use.

Conceptually, this study views Generative AI not as a replacement for teachers or an authoritative source of religious knowledge, but as a supporting technology that should be integrated into pedagogical designs that encourage exploration, discussion, analysis, reflection, and information evaluation. This perspective is consistent with findings that AI can broaden access to information and support learning, although these benefits depend heavily on the design of learning activities that preserve students' cognitive engagement and independence (Jose et al., 2025). In IRE, this framework is extended to include epistemic and ethical dimensions: students are expected not only to use AI but also to compare, evaluate, and explain in their own

words the information they obtain, as well as verify religious information (Hamidalloh et al., 2026). Within this framework, teachers play an important role as facilitators, guides, and validators who help students develop sound judgments about AI-generated outputs while ensuring that the learning process remains aligned with the values of Islamic education (Ibrohim et al., 2026). This perspective provides the conceptual basis for examining the relationships among technology use, pedagogical practices, critical thinking, learner autonomy, religious information verification, and academic integrity in IRE learning.

Against this background, this study aims to describe and analyze the use of Generative AI in IRE learning at SMAIT Asy-Syukriyyah. It examines the forms and purposes of its use, the benefits and challenges encountered, its contribution to students' critical thinking and learner autonomy, the verification of religious information, and the role of teachers in guiding its use. More specifically, the study addresses the following questions: How is Generative AI used in IRE learning? What benefits and challenges arise from its use? How does the technology support critical thinking and learner autonomy? How is AI-generated religious information verified? How do teachers fulfill their roles as facilitators, guides, and validators? And how are honesty, responsibility, ethics, and academic integrity upheld in its use? This focus is consistent with recent qualitative research that identifies the experiences of teachers and students, AI-use practices, information verification, and ethical considerations as important aspects of understanding the integration of Generative AI into Islamic education (Nyla, 2026).

This study contributes an empirical account of Generative AI use in IRE learning through a qualitative case study at SMAIT Asy-Syukriyyah, bringing together the technological, pedagogical, cognitive, religious, and ethical dimensions within a single learning context. Previous research has examined the opportunities and risks of AI in Islamic education, as well as the importance of digital literacy, verification, and teachers' roles. However, field research in specific school settings remains necessary to demonstrate how these principles are implemented in actual learning activities (Isti'ana, 2026). The article's novelty lies in its integrated examination of how Generative AI functions as a supplementary learning tool and how its use is situated within critical thinking, learner autonomy, religious information verification, teacher guidance, and the promotion of academic integrity. This approach moves beyond simply identifying the benefits or risks of the technology to examining

AI use as part of the pedagogical relationship among teachers, students, religious knowledge, and digital technology in IRE learning.

Literature Review

In this study, Generative AI is understood as a technology capable of generating new content based on user instructions and used as a supplementary learning tool, rather than as a replacement for teachers or an authoritative source of knowledge. In education, approaches to Generative AI have evolved from using the technology as an information-provision tool toward viewing AI as a cognitive partner that still requires active human involvement. A systematic review of the effects of Generative AI on self-regulated learning and critical thinking indicates that AI can support learning through personalization, adaptive feedback, analysis, evaluation, and reflection. However, these benefits may diminish when students become overly dependent on AI-generated outputs (Sardi et al., 2025). This perspective is relevant to the framework of the present study, which examines AI use across five dimensions: technological, pedagogical, cognitive, religious, and ethical. In IRE, the cognitive dimension cannot be separated from the epistemic dimension because students need to evaluate AI-generated outputs, while information concerning the Qur'an, hadith, and Islamic teachings requires verification against reliable and accountable sources. Research on AI as an epistemic mediator in IRE learning also emphasizes that AI can broaden access to Islamic perspectives but should not be regarded as the final religious authority, as its outputs may contain oversimplifications, biases, and information that requires verification (Hamidalloh et al., 2026). Accordingly, the conceptual foundation of this study connects Generative AI use with active learning, information evaluation, learner autonomy, scholarly authority, and the ethics of technology use.

Previous studies indicate that the use of Generative AI in Islamic education presents both opportunities and interrelated challenges. Research on the development of Generative AI-based IRE teaching materials found that this technology can support the development of adaptive materials, more personalized learning, multimodal resources, and assessment activities. However, it also poses risks, including religious misinformation, technological dependency, academic plagiarism, and the weakening of spiritual and humanistic dimensions when its use is not pedagogically guided (Salmany et al., 2026). Another study on the use of ChatGPT in IRE identified benefits such as access to learning materials, faster preparation of instructional resources, support for discussion, and feedback. The challenges included

hallucinations, inaccurate religious information, dependency, bias, and concerns about academic integrity (Udhma & Burhanuddin, 2025). At the school level, qualitative research on IRE teachers indicates that the increasing use of AI by students can shift teachers' roles from being the primary source of information to serving as facilitators and ethical guides who help students evaluate AI-generated information (Nyla, 2026). These findings are reinforced by a qualitative study conducted in an Islamic school, which found that teachers used AI to support the development of learning materials and activities, while students used it to obtain explanations, summarize content, develop ideas, and complete assignments. At the same time, the study identified concerns involving copying, cognitive dependency, the accuracy of religious information, and the ethical boundaries of AI use.

Nevertheless, previous studies reveal a research gap concerning the empirical relationship among Generative AI use, IRE learning processes, religious knowledge verification, critical thinking, learner autonomy, and teachers' roles within a single school-based learning context. Several previous studies have focused on the general opportunities and risks of AI, the development of teaching materials, user perceptions, or the formulation of ethical frameworks. By contrast, studies that simultaneously observe classroom AI-use practices, how students process AI-generated outputs, information-verification mechanisms, and teachers' pedagogical interventions remain relatively limited. A study of digital religious agency found that students' interactions with Generative AI can produce pragmatic-instrumental, exploratory-critical, or passive-accepting patterns of use. It also showed that learner autonomy does not automatically develop merely because students have access to technology (Rahman, 2026). Meanwhile, research involving IRE teachers in Padang showed that verifying AI-generated outputs is an important part of teachers' work, although educators may differ in their standards for determining which sources or authorities are adequate (Shobri & Alfurqan, 2026). These findings suggest that the central issue is not merely the availability of AI, but how it is incorporated into specific pedagogical practices and how teachers and students develop processes for evaluating technological outputs. Therefore, field research in a specific school setting is needed to provide a more contextualized understanding of the relationships among AI use, learning activities, knowledge verification, and the development of academic responsibility in IRE.

This article seeks to address this gap through a qualitative case study at SMAIT Asy-Syukriyyah, combining teachers' perspectives gathered through

interviews with observations and documentation of learning activities. This approach differs from studies that solely assess AI effectiveness or formulate ethical recommendations at a conceptual level. Instead, it seeks to understand how Generative AI is used in actual IRE learning practices and how the meaning of its use is shaped through interactions among teachers, students, learning materials, and AI-generated outputs. The focus on verification is also supported by research that positions tabayyun as part of digital and AI literacy in IRE. This involves treating AI-generated outputs not as final truths but as information that must be checked against credible and relevant sources (Isti'ana, 2026). In addition, research on ethical AI pedagogy in Islamic education highlights the importance of connecting AI literacy with the valuesof ṣidq (truthfulness), amānah (trustworthiness), mas'ūliyyah (responsibility),and tabayyun (verification). Thus, technology use should be assessed not only in terms of efficiency but also in terms of responsibility and integrity throughout the learning process (Ibrohim et al., 2026). In this regard, the contribution of this article is not to establish the statistical effectiveness of Generative AI, but to provide a contextual understanding of AI-use practices and the pedagogical mechanisms through which the technology can support learning without taking over students' thinking, evaluation, and responsibility.

In terms of research approaches, previous studies have employed a range of designs according to their respective research objectives. Research on the effects of Generative AI on self-regulated learning and critical thinking has used a systematic review to map evidence across multiple studies, whereas research on digital religious agency has adopted an interpretive qualitative approach involving interviews, focus group discussions, and digital artifacts (Sardi et al., 2025); (Rahman, 2026). Other research has employed qualitative case studies involving interviews, observations, and documentation to understand ethical AI-use practices in Islamic education (Amin, 2026), while a study of IRE teachers' verification of AI-generated content used thematic analysis of interviews with secondary school teachers (Shobri & Alfurqan, 2026). These trends indicate a shift in attention from the mere acceptance of technology or its benefits toward questions concerning usage processes, output evaluation, student agency, teachers' roles, and ethics. In the present study, this trend supports the use of thematic analysis, as interview, observation, and documentation data are examined to identify patterns related to Generative AI use, pedagogical benefits, usage risks, critical thinking, verification, teachers' roles, learner autonomy, and ethics. Accordingly, the analytical strategy is designed to understand learning

experiences and practices in context rather than to measure relationships among variables statistically.

In synthesis, the literature indicates that Generative AI in IRE can be understood as a supplementary learning technology that offers pedagogical benefits while also posing epistemic, cognitive, and ethical risks. This synthesis suggests that using AI to explore learning materials and develop learning activities should be followed by analysis, comparison, verification, and reflection so that students remain actively involved in knowledge construction (Salmany et al., 2026); (Sardi et al., 2025). In IRE, this process entails an additional requirement: the verification of religious information, since AI-generated outputs cannot be treated as the sole source of truth and must be checked against authoritative sources (Hamidalloh et al., 2026). At the same time, teachers serve as facilitators, guides, and validators, while students are positioned as both users and evaluators of information. This relationship is necessary to ensure that AI supports rather than replaces critical thinking and learner autonomy (Ibrohim et al., 2026). This synthesis provides the conceptual foundation for examining interview, observation, and documentation data through the following themes: Generative AI use, pedagogical benefits, usage risks, critical thinking, information verification, learner autonomy, teachers' roles, and ethics and academic integrity.

Research Methods

This study employed a qualitative approach with a case study strategy to develop an in-depth understanding of the use of Generative Artificial Intelligence (Generative AI) in Islamic Religious Education (IRE) learning at SMAIT Asy-Syukriyyah. The case study strategy was selected because the research sought to understand AI-use practices within a specific learning context, including teachers' and students' experiences, forms of learning activities, information-verification processes, the development of critical thinking, learner autonomy, and the implementation of ethics and academic integrity. A qualitative approach enables phenomena to be understood through the experiences, activities, and meanings that emerge in their natural contexts, while thematic analysis can be used to identify patterns and themes in qualitative research data (Mishra & Dey, 2022). This strategy is also consistent with recent research on AI use in Islamic education that employs qualitative case studies to examine teachers' practices, student activities, ethical concerns, and information-verification processes in authentic learning contexts (Amin, 2026); (Ibrohim et al., 2026). The specific case examined was the use of Generative AI in IRE learning at SMAIT Asy-Syukriyyah.

Accordingly, the interpretation of the findings was situated within the institutional context and learning practices of the research site.

The data sources consisted of primary data and supporting data. Primary data were obtained through interviews with IRE teachers and observations of IRE learning activities involving Generative AI, while supporting data were obtained from documentation of the learning process and AI use. The interviews were conducted to explore the forms and purposes of AI use, its benefits and limitations, the validity of religious information, student autonomy, the ethics of AI use, and teachers' roles in providing guidance, correction, validation, and opportunities for reflection. Observations were conducted to document teachers' and students' activities during learning, including instructions provided before AI use, the use of AI to explore learning materials, prompt formulation, understanding AI-generated outputs, information comparison, source verification, learning interactions, ethical practices, learner autonomy, and learning evaluation. Documentation served as supporting evidence to strengthen the information obtained through interviews and observations. The combination of interviews, observations, and documentation has also been used in qualitative research on AI use in Islamic education because it enables phenomena to be examined through multiple data sources (Amin, 2026); (Ibrohim et al., 2026).

Data were collected through interviews, observations, and documentation, using instruments aligned with the research focus. The interview instrument addressed eight main areas: forms of Generative AI use, purposes of use, benefits, limitations, the validity of religious information, student autonomy, the ethics of AI use, and teachers' roles. The observation instrument focused on ten aspects: teacher activities, student activities, prompt formulation, content comprehension, critical thinking, verification, learning interactions, ethics, learner autonomy, and evaluation. Documentation was used to supplement information about the learning process and AI use. The instrument structure followed the research data and was not expanded to include indicators that had not been established in the research design. In qualitative research, interviews and observations can generate data about experiences and practices that are subsequently analyzed to identify patterns and themes. Educational research using thematic analysis has also demonstrated the use of interviews and observations as data sources for developing an in-depth understanding of learning experiences (Suryobroto et al., 2022). In this study, data collection was specifically

directed toward understanding how AI was used and how teachers and students responded to AI-generated outputs during IRE learning.

The criteria for selecting data were based on their relevance to the research focus and context, rather than on inclusion and exclusion criteria of the kind used in literature reviews. Relevant interview data consisted of information from IRE teachers concerning Generative AI-use practices, purposes, benefits, limitations, the validity of religious information, student autonomy, ethics, and teachers' roles. Relevant observational data consisted of learning activities involving AI use, prompt formulation, comprehension and processing of AI-generated outputs, critical thinking, verification, interaction, ethics, learner autonomy, and evaluation. The documentation included materials related to IRE learning and the use of Generative AI. Conversely, information unrelated to the use of Generative AI in IRE learning within the research context was not used as a basis for analysis. Because the number of informants was not specified in the available research data, no informant count was established or added on the basis of assumptions. Similarly, the "findings summary" column in the available interview format was not treated as finalized empirical data because the research document explicitly indicated that this section remained an analytical template or draft and needed to be confirmed against the actual teacher interview results.

The unit of analysis was the practice of using Generative AI in IRE learning, while the research subjects or informants consisted of IRE teachers and students involved in IRE learning activities that incorporated Generative AI. Teachers were an important source of information for understanding the purposes of AI use, pedagogical considerations, forms of guidance, information correction and validation processes, and ethical considerations. Students were included in the observational context, particularly in activities involving content exploration, prompt formulation, processing AI-generated outputs, information comparison, verification, conclusion formulation, and learning evaluation. The selection of these subjects is consistent with the characteristics of qualitative research, which seeks to understand phenomena through the experiences and practices of the actors directly involved. For example, a qualitative study of digital agency in Islamic learning used teachers and students as sources of information to understand patterns of interaction with Generative AI and their implications for learner autonomy and information evaluation (Rahman, 2026). In this study, the terms research subjects/informants were used because the research did not involve a population and sample in the statistical sense.

Data were analyzed using thematic analysis, following the sequence data → coding → categories → themes → interpretation → conclusions. The initial stage involved familiarization with the data obtained from interviews, observations, and documentation. Relevant data segments were then identified in relation to the research focus and assigned initial codes. These codes were subsequently grouped into categories based on shared meanings and developed into broader themes to explain patterns of Generative AI use in IRE learning. Thematic analysis is appropriate when research aims to identify patterns of meaning emerging from qualitative data and relate them to the research questions (Mishra & Dey, 2022). Educational research using thematic analysis has also described a process involving familiarization with the data, open coding, theme construction, theme review, theme naming, and report preparation as part of developing meaning from qualitative data (Suryobroto et al., 2022). In this study, the initial codes formulated in the analytical design included AI for information seeking, AI for question generation, quick answers, answers requiring verification, potentially inaccurate answers, copying answers, comparing sources, teacher corrections, honesty, and Qur'anic verse/hadith verification. These codes were then organized into categories such as exploration, learning support, efficiency, validation, information risks, dependency, verification, guidance, integrity, and religious validation. These categories subsequently informed the development of themes concerning Generative AI use, pedagogical benefits, AI-use risks, critical thinking, teachers' roles, and AI ethics.

The interpretation stage involved connecting the resulting themes to the research focus and established conceptual framework without turning the data into claims unsupported by empirical evidence. The synthesis of interview and observational data was intended to identify areas of agreement and difference concerning AI use, learning efficiency, critical thinking, information validity, learner autonomy, ethics, and teachers' roles. The research document provided a preliminary synthesis framework; however, formulations that remained at the analytical or draft stage were treated as an analytical framework rather than as finalized empirical evidence. Accordingly, the final analysis would distinguish between actual data obtained from interviews, observations, and documentation and the researcher's thematic interpretations. This distinction is important because qualitative findings are developed through the interpretation of data patterns rather than through statistical hypothesis testing. No statistical hypotheses were used in this study because its purpose was to understand the practices and experiences associated with Generative AI use in IRE learning within their specific context.

The analysis was then used to explain how Generative AI was employed as a supplementary learning tool, how its benefits and risks emerged in learning activities, how students were guided toward critical thinking and autonomy, how religious information was verified, how teachers fulfilled their roles as facilitators and validators, and how ethics and academic integrity were applied in the use of the technology.

Research Results

The findings of this study are presented based on documented field data obtained through interviews with Islamic Religious Education (IRE) teachers and observations of IRE learning activities involving Generative AI. The data were subsequently organized through coding, categorization, and thematic grouping, as outlined in the research documentation.

1. Utilization of Generative AI in IRE Learning

The observation findings indicate that Generative AI was used in IRE learning as a tool for exploring learning materials. Student activities included using AI to obtain information and formulating questions or instructions for the AI system. During the learning process, teachers provided instructions before students began using AI.

Regarding prompt formulation, the observations documented students asking questions or providing instructions to Generative AI. The observations also indicated that students did not merely receive AI-generated outputs but further processed the information by explaining the results they obtained.

The synthesis of interview and observation data identified the theme of AI utilization, which encompassed teachers' use of AI as a learning aid and students' use of AI to explore learning materials. Within this synthesis, Generative AI was identified as a supplementary tool in IRE learning.

2. Efficiency and Support for Learning Activities

The research data documented the use of Generative AI to provide alternative learning materials and questions. Classroom observations showed that students obtained information through AI during learning activities. Both data sources were grouped under the theme of learning efficiency.

During the coding process, the use of AI to seek information was categorized as exploration, while its use to generate questions was categorized as learning support. Both categories were grouped under the theme of

Generative AI utilization. The rapid provision of answers was categorized as efficiency and placed under the theme of pedagogical benefits.

3. Critical Thinking and Information Processing

The classroom observations documented students comparing AI-generated answers and analyzing the information they obtained. Learning activities also included discussions between teachers and students, as well as clarification of AI-generated results.

The synthesis of interview and observation data indicated that teachers guided students not to accept AI-generated answers immediately, while students compared and discussed the information they received. In the data classification process, source comparison was assigned to the category of verification and the theme of critical thinking.

4. Verification of Religious Information

The classroom observations documented the examination of information against other sources. When dealing with religious subject matter, information obtained through AI was verified using learning resources.

The synthesis of interview and observation data indicated that teachers emphasized source verification, while students examined the information they obtained. This theme was recorded as information validity, with verification identified as one component of Generative AI use in IRE learning.

The coding results also included Qur'anic verse/hadith verification as an initial code, which was assigned to the category of religious validation and the theme of AI in IRE.

5. Student Autonomy in Learning

The classroom observations documented students formulating their own conclusions after using AI. Learning activities were also directed toward discouraging students from simply copying AI-generated outputs, while learning evaluation emphasized understanding, argumentation, and process.

In the data synthesis, teachers were recorded as taking steps to prevent students from becoming dependent on AI, while students were asked to explain information in their own words. The theme of learner autonomy was documented in the synthesis as the use of AI to support, rather than replace, students' learning activities.

6. Ethics in the Use of Generative AI

The classroom observations documented teachers discussing responsible AI use, with an emphasis on honesty and academic responsibility. The use of AI in learning activities was recorded as taking place under teacher guidance.

The synthesis of interview and observation data identified honesty and responsibility as themes relating to AI-use ethics. During coding, honesty was assigned to the category of integrity and the theme of AI ethics.

7. Teachers' Roles in Generative AI-Supported Learning

The classroom observations indicated that teachers provided instructions before AI use, engaged students in discussions, clarified AI-generated results, and evaluated the learning process and outcomes.

In the data synthesis, teachers were identified as guides and validators, while clarification of AI-generated outputs occurred through classroom interactions. The coding process assigned teachers' corrective actions to the category of guidance and support and the theme of teachers' roles.

8. Research Categories and Themes

The thematic analysis documented in the research materials grouped the data into several themes: Generative AI utilization, pedagogical benefits, AI literacy, challenges associated with Generative AI, AI-use risks, critical thinking, teachers' roles, AI ethics, and AI in IRE. The categories identified included exploration, learning support, efficiency, validation, information risks, dependency, verification, guidance and support, integrity, and religious validation.

Discussion

1. Reinforcing the Main Findings and Their Relationship to the Research Objectives

The findings indicate that Generative AI is used in Islamic Religious Education (IRE) learning primarily as a supplementary tool for exploring learning materials, formulating questions, and developing learning activities, rather than as a replacement for the entire learning process. The observation data show that students use Generative AI to explore learning materials, formulate instructions for AI, explain the results they obtain in their own words, compare AI-generated answers, and verify information against other

sources. These findings directly relate to the research objective of identifying the forms of Generative AI use and examining how the technology is integrated into IRE learning.

The findings also indicate that AI use does not occur in isolation but takes place within a learning process involving teacher guidance, student information processing, source verification, discussion, and evaluation. In the synthesis of interview and observation data, AI is positioned as a supplementary tool, while teachers act as guides and validators and students participate in evaluating the information they obtain. This pattern is consistent with research showing that AI can support learning activities, although its effectiveness depends on pedagogical design and teacher mediation (Aldim et al., 2025).

2. Generative AI as a Supporting Technology in the IRE Learning Framework

Within the conceptual framework of this study, the technological dimension positions Generative AI as a supporting tool, while the pedagogical dimension situates its use within activities involving exploration, discussion, analysis, and reflection. The findings reflect this framework because students do not use AI solely to obtain answers; they also process the information further, compare responses, and discuss the results during learning activities.

These findings support the view that Generative AI is more appropriately positioned as a cognitive support partner than as a replacement for human thinking, because learning benefits emerge when AI is incorporated into task designs that continue to require student evaluation and reflection (Kumara et al., 2026). In IRE, this positioning is particularly important because AI use concerns not only access to information but also how students understand and take responsibility for religious information.

Previous research in Islamic education has also shown that Generative AI can be used to provide more adaptive learning materials, produce varied instructional resources, and support learning activities. However, it also carries risks, including dependency, plagiarism, and inaccurate religious information (Salmany et al., 2026). Accordingly, the use of AI as a supplementary learning tool identified in this study reflects patterns also reported in previous IRE research.

3. Critical Thinking, Learner Autonomy, and Information Evaluation

One important finding is the emergence of activities that require students to compare AI-generated answers, examine information, explain AI-generated results in their own words, and formulate their own conclusions. The observation data show that students do not simply accept AI outputs; they process them further and analyze the information obtained. At the same time, the research synthesis indicates that teachers guide students not to accept AI-generated answers uncritically or become dependent on AI during the learning process.

These findings suggest that, in the context of this study, critical thinking is demonstrated through activities involving comparing, examining, discussing, and explaining AI-generated information. This pattern is consistent with research indicating that engagement with Generative AI can support critical thinking and self-directed learning when accompanied by metacognitive processes and evaluation, whereas excessive use may increase the risk of dependency (Sardi et al., 2025).

However, research on digital religious agency indicates that AI use may also produce superficial forms of autonomy when students use AI merely to obtain answers without engaging in epistemic evaluation. That study distinguishes between instrumental, exploratory-critical, and passive-accepting patterns of use and emphasizes that autonomy requires both technical competence and the ability to evaluate knowledge (Rahman, 2026). This distinction clarifies that learner autonomy in the present study should not be understood merely as students' ability to use AI independently; it also involves their ability to take responsibility for the information they obtain.

4. Religious Information Verification as a Distinctive Characteristic of IRE Learning

The findings indicate that verification is an important component of Generative AI use in IRE learning. Observations show that students examine information against other sources and that religious information is verified using learning resources. The research coding also specifically identifies Qur'anic verse and hadith verification as part of the category of religious validation, highlighting the need for more rigorous source checking when dealing with Islamic subject matter.

This approach is consistent with research that positions ChatGPT as an epistemic mediator in IRE rather than an independent religious authority, because AI-generated outputs may contain oversimplifications of religious teachings, biases, and an appearance of authority that necessitates teacher

verification and critical digital literacy (Hamidalloh et al., 2026). Accordingly, the source-checking activities identified in this study represent an epistemic requirement of IRE learning, particularly when AI-generated information concerns the Qur'an, hadith, and Islamic teachings.

These findings are also consistent with qualitative research on IRE teachers in Indonesia, which identifies the need for information verification and the reinforcement of tabayyun, ṣidq, amānah, and mas'ūliyyah in learning practices involving AI (Ibrohim et al., 2026). A distinguishing feature of the present study is that it documents verification within observed learning activities, presenting information checking as part of classroom practice rather than merely as a normative principle.

5. Teachers' Roles as Facilitators, Guides, and Validators

The findings show that teachers provide instructions before AI use, clarify AI-generated results, guide students against simply copying AI outputs, and evaluate both the learning process and its outcomes. The synthesis of interview and observation data further positions teachers as guides and validators of information.

These findings indicate that the presence of Generative AI does not eliminate teachers' functions in IRE learning. Rather, it shifts some of their pedagogical attention toward guiding AI use, checking information, and clarifying outputs. Research on IRE teachers in Padang similarly indicates that Generative AI use shifts part of teachers' work toward verification and that determining the authority of information is an important concern in this practice (Shobri & Alfurqan, 2026).

The positioning of teachers as facilitators and validators is also reflected in research on Generative AI-based IRE teaching materials, which identifies teachers as facilitators, validators of values, and pedagogical guides (Salmany et al., 2026). This alignment reinforces the continued importance of teachers in ensuring that AI use remains consistent with learning objectives and the specific characteristics of IRE content.

6. Ethics, Honesty, and Academic Integrity

The findings indicate that AI use is accompanied by an emphasis on honesty and academic responsibility. The observations document teachers discussing responsible AI use, while students are guided not to simply copy AI outputs and are encouraged to formulate their own conclusions. In the coding process, honesty was assigned to the category of integrity and the

theme of AI ethics, whereas copying answers was assigned to the category of dependency and the theme of AI-use risks.

These findings are consistent with research identifying dependency, declining academic integrity, limited critical reflection, and verification concerns as challenges associated with AI use in Islamic education (Ibrohim et al., 2026). Research on Generative AI ethics in education has also identified academic misconduct, privacy concerns, and diminished critical thinking as risks that need to be addressed through teacher competence, regulatory frameworks, and responsible AI use (Harahap & Sofyan, 2025).

In the context of IRE, the ethical dimension concerns not only compliance with academic rules but also responsibility in handling religious information and preserving students' own thinking processes. Research on AI in Islamic education likewise identifies honesty, responsibility, and human oversight as important elements of AI integration that aligns with values-based educational objectives (Johari, 2026).

7. Scientific and Practical Contributions of the Study

The contribution of this study lies in its account of Generative AI use in IRE learning through the interconnected dimensions of technology, pedagogy, cognitive processes, religious validation, and ethics. The findings position AI as a supporting technology, teachers as facilitators, guides, and validators, and students as both users and evaluators. They also identify output examination as part of critical thinking and source verification as a specific requirement when dealing with Islamic subject matter.

Conceptually, this pattern indicates that AI integration in IRE cannot be adequately explained solely in terms of technological efficiency, because AI use is also associated with knowledge evaluation and ethical responsibility. This finding is consistent with research proposing that AI in IRE should be positioned as a values-sensitive pedagogical instrument, with attention to theological validation, ethical oversight, and character development (Tanjung et al., 2026).

In practical terms, the findings provide a basis for IRE learning practices in which students use AI as a starting point for exploration, followed by information checking, comparison, discussion, and the development of their own understanding. This approach is consistent with research emphasizing that AI should support cognitive activities while preserving the

human role in reasoning and academic decision-making (Kumara et al., 2026).

8. Limitations of the Study

This study has several limitations. First, it focuses on the use of Generative AI in Islamic Religious Education (IRE) learning at SMAIT Asy-Syukriyyah. Therefore, the findings reflect the specific institutional and pedagogical context of the school and may differ from practices in other educational settings. Second, as a qualitative case study, the research aims to develop an in-depth understanding of AI-use practices rather than to produce statistically generalizable findings. Accordingly, the findings should be interpreted in relation to the context in which the study was conducted.

Future research could involve multiple schools with different institutional characteristics to examine similarities and differences in Generative AI integration in IRE learning. Further studies could also investigate how pedagogical strategies, AI literacy, religious information verification, and assessment practices shape students' critical thinking, learner autonomy, and academic integrity.

9. Implications and Directions for Future Research

In light of these findings and limitations, Generative AI-supported IRE learning should retain teacher guidance, AI-output evaluation, religious source verification, and the reinforcement of academic responsibility. The findings position effective AI use within an appropriate pedagogical support framework. This is consistent with research recommending the development of AI literacy that integrates technical competence, ethical considerations, and pedagogical alignment (Aldim et al., 2025).

Future research could extend the investigation to additional school contexts and informants, while examining in greater depth how task design, prompting practices, Qur'anic verse and hadith verification strategies, and assessment design influence the quality of students' critical thinking and learner autonomy. This direction is relevant to research on digital religious agency, which highlights the need to understand the relationship among AI literacy, epistemic evaluation, and student autonomy in religious learning (Rahman, 2026).

Conclusion

This study shows that Generative AI is used in Islamic Religious Education (IRE) learning at SMAIT Asy-Syukriyyah as a supplementary tool for exploring learning materials, obtaining alternative information, formulating questions, and supporting learning activities. Its use involves the active participation of both teachers and students. Students do not merely accept AI-generated outputs; they also compare information, analyze it, explain it in their own words, and formulate conclusions. In IRE learning, these processes are accompanied by the need to verify religious information, particularly when it concerns Qur'anic verses, hadith, and Islamic subject matter. The findings also reveal concerns about dependency, copying AI-generated answers, honesty, and academic responsibility in the use of AI.

Conceptually, this study demonstrates that the use of Generative AI in IRE should be understood through the interrelationship among technological, pedagogical, cognitive, religious, and ethical dimensions. The study contributes to an understanding of how these dimensions are interconnected in learning practices, with teachers serving as facilitators, guides, and validators, while students act as both users and evaluators of AI-generated information. Thus, the use of Generative AI in IRE extends beyond using technology to obtain information; it is directed toward a learning process that continues to prioritize understanding, reasoning, verification, and academic integrity as essential components of student learning activities.

Further development of learning practices could focus on strengthening AI literacy integrated with religious literacy, particularly by fostering routine source verification, evaluation of AI-generated outputs, transparency in AI use, and task design that encourages students to develop their own understanding and arguments. Future research could expand the range of school contexts and informants while examining in greater depth the processes of religious information verification, students' patterns of AI use, and assessment strategies that can preserve learner autonomy and academic integrity in IRE learning.

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