

Challenges for Islamic Religious Education Lecturers in Using an Inquiry-Based Scientific Approach to Medical Faculty Students in the Digital Era

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Abstract. This study aims to describe the challenges of implementing an inquiry-based scientific approach in Islamic Religious Education (PAI) courses for medical students in the digital era, particularly when teaching abstract and normative Islamic aqeedah concepts. The research employed a qualitative, phenomenological approach. Data were collected through participant observation, structured interviews, and documentation. Interviews were conducted with eight lecturers from the Faculty of Islamic Religious Education at the University of Muhammadiyah Palembang's Faculty of Medicine. The data analysis used is thematic qualitative analysis, namely identifying, analyzing, and reporting data according to themes that appear from students' learning experiences. The analysis steps used were data collection, data presentation, data verification, and conclusion drawing. Initially, data were collected using structured interviews, followed by observations of the inquiry learning process using a scientific approach, and a review of student assignment/project documents. The data were then summarized into field notes, followed by source triangulation to verify their accuracy, and finally, conclusions were drawn. The results of the study show that Islamic Religious Education lecturers face the challenge of adapting to digital technology to develop superior Islamic Religious Education learning activities that are relevant to the knowledge and characteristics of medical students, amid limited and uneven learning resources. In addition to the ability to adapt to digital technology, Islamic Religious Education lecturers also face the challenge of being skilled in integrating scientific approaches and normative religious materials, empowering classroom facilitation skills, and fostering independent learning abilities in students. These findings recommend the need for a special forum for developing digital technology adaptation skills for Islamic Religious Education lecturers on a regular and continuous basis, especially for lecturers who teach students at the Faculty of Medicine.

Keywords: Digital Era, Inquiry Learning, Islamic Religious Education, Scientific Approach

INTRODUCTION

Islamic Religious Education is a religious course studied at Islamic Religious Colleges (PTKI) in Indonesia, covering all Islamic teachings, including faith, worship, sharia, transactions, and morals. All of these aspects are divided into several Islamic Religious Education courses. Materials such as aqeedah are more faith-based than empirical, so they are often considered difficult to explain using a scientific framework. Therefore, it is important to develop a pedagogical approach that can bridge the gap between faith and scientific reasoning so that students can internalize the values of faith in a critical, reflective, and contextual manner, without losing the spiritual substance of Islamic teachings (Saputra & Subki, 2024). The problem that is often found in learning Islamic Religious Education lies in the teaching and learning process, which tends to be boring. Viewed from the educational aspect, this is due to a lack of creativity, innovation, and the wrong choice of learning model used (Nusroh & Ahsani, 2020).

In the process of knowledge transfer, a learning approach is needed to ensure the material is well received; one such approach is a scientific, inquiry-based approach. The scientific approach provides students with learning experiences in solving problems through observation activities, asking questions, answering problems, analyzing, and drawing conclusions (Pujiastuti & Haryadi, 2023). In the process of gaining this learning experience, lecturers must instruct the scientific learning approach pattern in the classroom. Learning activities start from curiosity by asking scientific questions and involving students in collecting and analyzing data (Dah et al., 2024). Learning activities start with curiosity, the asking of scientific questions, and students' involvement in collecting and analyzing data. Using a scientific approach needs to be adapted to the behavior of the current generation, who are accustomed to digital platforms (Novitra et al., 2021).

Teaching must take into account aspects of student readiness, maturity of thinking, and learning methods to achieve goals (Lubis et al., 2024). Readiness to learn, such as health, supporting facilities and infrastructure, learning resources, and learning time, encourages students to take lessons seriously. Likewise, the maturity of thinking, such as critical thinking, scientific thinking, and quick thinking, can make it easier for students to solve problems during the learning process and make it easier to receive lesson material. Appropriate learning methods make it easier for educators to convey material to students. Thus, these three aspects form a unit that educators must consider when determining appropriate methods and approaches to learning.

The initial observations indicate that the learning approach used in the Islamic Religious Education course at the Faculty of Medicine, Muhammadiyah University of Palembang, is scientific. This can be seen in the classroom learning process, where lecturers provide stimuli by asking questions about the material being studied; students make observations, collect information, think, and convey the results. The inquiry-based scientific approach, from a domain perspective, provides students with the space to develop according to their individual intellectual potential. Previous research has found that inquiry can integrate religious values with students' religious character (Irwandi et al., 2022).

The scientific approach is a learning process that positions students as subjects and facilitates learning through a series of scientific activities (Sibuea & Sukma, 2021). Inquiry learning is a process of answering questions and solving problems based on facts and observations (Siswati et al., 2023). Implementing a scientific approach based on inquiry-based learning, including lecturers' pedagogical competence within the Tri Dharma of Higher Education, encompasses aspects of education and learning. This ability is influenced by the appropriate environment, conditions, perceptions, and motivation (Ikhrom, 2020). To develop their competence, lecturers are required to continually learn, develop knowledge, disseminate it to the community, and adapt to and follow changes in both the latest technology and learning (Roqib et al., 2021). The scientific approach has steps that make

students think critically, think scientifically, and be active in the learning process as a fun learning experience (Sibuea & Sukma, 2021). The scientific approach based on inquiry learning can be applied through five stages, namely observing, asking, trying, reasoning, and discussing (Holil, 2023). The scientific approach based on inquiry learning is among the innovative and beneficial learning strategies for lecturers and students, especially for increasing self-confidence (Divina et al., 2023).

Inquiry learning is a way of presenting material by directing students to solve problems, analyze, and draw conclusions. Inquiry learning is a way of presenting material by directing students to solve problems, analyze, and draw conclusions (Hermawati, 2021). The aim is to instill critical thinking skills, analytical skills, and argumentation skills in students (Fakhriyah et al., 2021). The inquiry-based scientific approach is not new in education, but it remains relevant for learning in the digital age. Therefore, lecturers are expected to possess innovative and transformative skills to integrate this approach with appropriate digital technology, aligned with the learning objectives of Islamic Religious Education of the faculty of medicine. The urgency of this research is being examined because, so far, Islamic Religious Education courses are generally taught using a traditional and normative approach. At the same time, medical students have rational, critical, and scientific learning characteristics. This research aims to bridge these two approaches while also addressing the pressing need for integration between Islamic values and the ethical and moral challenges of the modern medical world.

This research is crucial because Islamic Religious Education courses are generally taught using a traditional and normative approach. This approach does not meet the needs of medical students, who tend to think rationally, critically, and realistically. Therefore, the researchers aimed to identify the appropriate meaning of science-based inquiry learning and the use of digital technology to make them relevant to students' needs and modern medicine.

Specifically, the inquiry-based scientific approach enables students to actively explore religious issues relevant to medical practice, such as bioethics, health jurisprudence, and sharia-based clinical decision-making. This can enrich students' understanding of Islamic teachings in context and develop critical and reflective thinking skills relevant to the medical profession. This research makes a significant empirical contribution to the development of PAI learning designs that are more contextual, dialogic, and better adapted to the needs of medical students.

METHOD

The readiness and maturity of thinking among Faculty of Medicine students accustomed to making observations is the reason for using an inquiry-based scientific approach. Normative and abstract Islamic Education material is suitable for study using a scientific approach. This type of research is field research.

The research method used is qualitative with a phenomenological approach. The phenomenological approach was used because the researcher intended to uncover the underlying meaning of the challenges faced by Islamic Education lecturers in implementing inquiry learning with a scientific approach, using digital technology for medical students, who are generally familiar with digital technology and have an objective-thinking character. The concept of phenomenology guides researchers in collecting primarily observational data while still taking into account interview results and documentation. In addition, the concept of phenomenology guides the synthesis of data and drawing appropriate conclusions to obtain a meaningful picture of the problem being studied. The data analysis used is thematic qualitative analysis, namely identifying, analyzing, and reporting data according to themes that appear from students' learning experiences. The analysis steps used were data collection, data presentation, data verification, and conclusion drawing. Initially, data were collected using structured interviews, followed by observations of the inquiry learning process using a scientific approach, and a review of student assignment/project documents. The data were then

summarized in field notes, followed by source triangulation to verify their accuracy, and finally, conclusions were drawn. This research uses two data sources, primary and secondary. The primary data sources are lecturers at the Faculty of Medicine, Muhammadiyah University of Palembang, and the secondary sources are relevant journals and documents. The research informants were 8 lecturers who teach Islamic Religious Education courses. Data collection techniques included participant observation, structured interviews, and documents such as learning implementation plans, student project reports, and photo documentation. The collected data was then analyzed using qualitative analysis techniques.

FINDINGS

Lecturers' Understanding of the Inquiry Learning Approach

Education functions as a means of changing culture, developing potential, and creating the future existence of the nation, so it needs to be managed wisely (Zaky & Setiawan, 2023). From the results of participant observation and structured interviews and the theme, it was found that PAI lecturers understood the inquiry approach in PAI learning at the Faculty of Medicine, Muhammadiyah University of Palembang, namely:

Science-Based Inquiry Approach as a Means of Changing Culture

The results of participatory observations on the Islamic Religious Education (PAI) learning process show that the application of a scientific inquiry-based learning approach is relevant to the characteristics of medical students, especially for developing the way medical faculty students think about Islamic Religious Education (PAI) learning. Furthermore, this approach helps transform the rigid Islamic Religious Education (PAI) learning culture into a more engaging and innovative one. Students demonstrate a strong sense of collaboration in projects assigned by their lecturers. They also demonstrate an interest in learning PAI, similar to the interest in specialized courses in the Faculty of Medicine.

From the results of the participation observation, it was also noted that two students prioritized completing medical practice assignments in their field of expertise over the PAI project assigned between ongoing assignments. The encouraging thing about this record is that, at the end of the assignment submission, the two students demonstrated good completion of the PAI project, with help from collaboration with other group members, even though it was several hours late relative to the submission deadline. According to the students' explanation during an interview, the practical assignment had reached its submission deadline, and they had to pass the course. In contrast, the Islamic Religious Education project could be completed by collaborating with the group members. The culture of collaboration among students of the Faculty of Medicine, Muhammadiyah University of Palembang shows encouraging and high findings outside of research.

Lecturer T provides a safe and inclusive space for students to ask questions, which serves as the foundation for a growing culture of inquiry. When students feel accepted and valued for their questions about religious texts, they are encouraged to delve deeper and connect religious material to real-life contexts, including the medical realities they face in their medical studies. The inquiry process develops naturally and is not forced. Students are intrinsically motivated to seek, explore, and test ideas in both religious texts and modern scientific literature. In other words, lecturers play a central role in fostering a healthy and supportive academic climate, enabling students to develop critical, analytical, and reflective thinking skills. This is an ideal situation for implementing inquiry-based learning in Islamic religious education in medical settings, as it harmonizes spirituality, ethics, and scientific rationality. Lecturer T's statement clearly illustrates that the success of inquiry-based learning depends not only on the method or material but is also greatly influenced by the instructor's

attitude and sensitivity in creating a safe, open discussion space that remains grounded in Islamic values.

The statement above illustrates that a safe and open learning environment is a primary prerequisite for the success of the inquiry learning approach, particularly in the context of Islamic Religious Education courses in the Faculty of Medicine. The lecturer's skill in responding to critical and sensitive questions while maintaining a foundation of Islamic values makes academic discussions not only lively but also meaningful. This demonstrates that scientific and religious approaches need not be framed as opposing viewpoints but can complement each other when supported by appropriate pedagogical sensitivity. Inquiry-based religious learning should actually strengthen students' faith, as they discover for themselves the logical reasons and evidence underlying Islamic teachings. As long as lecturers have the skills to manage discussions effectively, this approach will be highly beneficial, especially in an academic environment such as the Faculty of Medicine. By understanding these challenges, Islamic Religious Education lecturers can address and make this learning more effective, creating a more participatory and in-depth learning environment for students.

Scientific Inquiry-Based Learning Approach as a Means of Developing Student Potential

Through the ongoing learning process, it is known that the inquiry approach chosen and used in Islamic Religious Education learning at the Faculty of Medicine has been proven to be able to improve the critical thinking skills of individual students, such as getting used to asking questions about their lives critically. Applying an inquiry-based approach to PAI learning is the right step to support students' readiness to learn amid the demands of busy medical practice.

Participatory observations in project-based inquiry learning showed that the learning readiness of student groups was generally high, as evidenced by their ability to follow the learning and complete the lecturer's project assignments quickly and accurately. The potential for students to work together in teams can be fulfilled through science-based inquiry learning for medical faculty students. As previously explained, two students submitted assignments late because they were more focused on completing medical practice assignments, which had the same submission deadline. They found additional findings outside the research, namely the high level of collaboration among UMP Faculty of Medicine students. This finding has added a strategy to science-based inquiry learning in the future by integrating Islamic Religious Education material with medical material, so that students can complete one task to achieve the objectives of two different courses. According to S (2025), this will be a pleasant learning experience for students and will receive a positive response from all lecturers teaching PAI courses at the Faculty of Medicine.

The Inquiry Approach as a Means of Creating the Future Existence of the Nation

The Inquiry Learning-based approach is a learning process that emphasizes student activeness in exploring, formulating questions, and finding answers through exploration and in-depth reasoning potential (Sukmawati, 2020). Observations conducted on September 25, 2024, showed that this approach is relevant for encouraging students to accept and understand the meaning of Islamic teachings in the medical profession. An interview with Lecturer T supports this statement.

"Inquiry learning is an approach that can bridge religious texts with the dynamic realities of the medical world. Medical students, accustomed to scientific logic and analysis, can be trained to apply critical thinking skills to examine moral issues, medical ethics, Islamic bioethics, and even medical jurisprudence (T, 2024)."

The application of the inquiry learning approach in the Islamic Religious Education course for students of the Faculty of Medicine is considered highly relevant to addressing the challenges of cross-disciplinary learning between religion and medical science. Lecturer T emphasized that this

approach changes the way students learn, shifting the paradigm of memorizing religious texts to a process of deep, reflective, and contextual meaning. Medical students tend to have a cognitive background grounded in scientific logic and systematic thinking, so that through inquiry they can apply critical thinking skills, develop evidence-based arguments, and build an understanding of Islam that aligns with the realities of modern medical practice. Lecturer T sees inquiry-based learning as appropriate for contemporary issues in the clinical world, such as Islamic bioethics, medical fiqh, the ethics of medical decision-making, and sharia considerations in cases including abortion, organ transplantation, and the use of assisted reproductive technology (T, 2024).

Students can understand Islamic law from a normative perspective and examine differences of opinion among scholars, see the social and scientific context, and conclude religious attitudes that are relevant to the challenges of their profession as prospective Muslim doctors. The learning process uses a scientific approach based on inquiry, positioning students as active subjects in the search for meaning. They are challenged to ask critical questions, seek answers from various sources (including tafsir books, fatwas, medical journals, and the results of contemporary ijtihad), and relate findings to experiences and simulations in the medical world. This forms a more holistic learning process by involving cognitive, affective, and spiritual aspects. The principles of Islamic teaching are also applied, namely the principles of compassion, justice, and guidance, thereby increasing harmony and reducing learning stress for students (Taufikin et al., 2025).

The application of a scientific approach based on inquiry learning in the Islamic Religious Education (PAI) course at the Faculty of Medicine is very appropriate, as medical students must understand Islamic values applicable in medical contexts. This method connects religious teachings to students' social and medical realities. Based on Islamic medical ethics, students not only receive theory but also analyze real cases, sharia arguments, and moral dilemmas. Lecturers actively design interactive learning with discussions, questions and answers, and presentations, and encourage students to use primary sources linked to modern medical practice. Lecturers understand that Inquiry Learning simultaneously shapes students' scientific and religious attitudes, increasing their curiosity, critical thinking, logical argumentation, and moral and spiritual sensitivity as future professional and ethical Muslim doctors. The scientific application of Islamic Religious Education requires contextual learning design, relevant case studies, lecturers' role as facilitators, and the ability to consistently and optimally link cases to Islamic Religious Education.

"Training and workshops are needed for Islamic Religious Education (PAI) lecturers to become more skilled in implementing scientific learning models. Second, curriculum support is needed that allows for the integration of religious values with health sciences. Third, a collaborative approach between Islamic Religious Education (PAI) lecturers and science lecturers is also very helpful in developing contextual cases or learning materials (T, 2024)."

The successful implementation of a scientific approach based on inquiry learning depends heavily on lecturer readiness, curriculum support, and structured interdisciplinary collaboration. Inquiry emphasizes both process and outcomes. Lecturers need to be trained to assess students' critical thinking skills, arguments, and information-seeking processes. The scientific approach based on inquiry learning in Islamic Religious Education (PAI) at the Faculty of Medicine (FK) is a pedagogical strategy that is relevant to the challenges of the times and the need for character development among prospective medical students. This approach not only focuses on the transfer of religious knowledge but also encourages students to think critically, analytically, and reflectively about Islamic values in the context of medical science and the profession.

During the scientific stage, students observe phenomena, formulate questions, collect data, reason, and draw conclusions to explore issues in ethics, bioethics, mental health, and spirituality from an Islamic perspective, making learning more contextual and meaningful. They studied themes including: (a) patient rights in Islam, (b) the ethics of medical decision-making from a sharia perspective, and (c) the balance between medical endeavors and tawakkul. The challenge is that the

heavy academic load on medical students often makes it difficult to implement the ideal PAI learning process, particularly for in-depth exploration and open discussion. Therefore, the scientific approach and the specific needs of the Faculty of Medicine are crucial for curriculum design, evaluation methods, and the selection of topics relevant to the medical field. In addition, contextual teaching tools are needed, such as worksheets and case studies relevant to medicine; lecturer training, especially in facilitating Islamic value-based inquiry discussions; and the integration of Islamic values in learning scenarios, not as a complement but as a basis for thinking and acting.

Lack of Learning Resources that Support Complex Content

Interview results indicate that the implementation of inquiry learning in Islamic Religious Education (PAI) material at the Faculty of Medicine is hampered by limited learning resources; a lack of relevant and contextual references; a lack of access to religious literature to support the inquiry process; and limited use of technology. Islamic Religious Education courses often involve topics related to religious texts (such as the Qur'an, Hadith, and fiqh), which are normative and have clear rules or interpretations. Most lecturers stated that the references available in the field of Islamic Religious Education tend to be normative and do not directly address the contextual issues faced by medical students. This was conveyed by Lecturer S:

"Experiencing quite significant obstacles in terms of the availability of learning resources, especially when having to compile inquiry-based learning materials that are appropriate to the context of many available PAI references which are still general and normative, do not directly address complex issues and require other supporting data (S, 2024)."

This statement shows that normative teaching materials are insufficient to support the inquiry learning process, which demands exploration of actual and complex issues. These limitations mean that lecturers have to compile their own teaching materials from various sources. This process requires time, extensive access to literature, and contextual analysis skills. Inquiry learning requires students to explore current issues, analyze them critically, and draw conclusions based on religious arguments. Without adequate and relevant sources, students have difficulty finding data and scientific justification for their answers.

"I compile or curate material from various sources, including international journals, religious scholars' fatwas, and contemporary ijihad findings, to tailor it to the needs of medical students. This is quite time-consuming, and not all lecturers may have the time or access to do the same (H, 2024)."

"Inquiry learning demands more open and flexible materials. We must formulate stimulating questions that stimulate students' reasoning, not just provide information. In assessment, the challenge is how to fairly assess students' thinking processes and reflections, not just the final results or normative answers (N, 2024)."

The inquiry-based learning approach in the Islamic Religious Education (PAI) course at the Faculty of Medicine requires a high level of readiness among lecturers to compile materials and develop evaluation strategies. Lecturer H stated that the main challenge is designing material that is relevant and contextual to the medical world, which requires searching scientific journals, fatwas of scholars, and contemporary ijihad, a complex and time-consuming process. Lecturer N emphasized the importance of designing provocative questions to hone students' critical thinking skills and an assessment system that assesses thinking and reflection holistically. These challenges require high pedagogical competence, adequate access to resources, and institutional support.

The development of lecturer resources and adaptive academic policies is essential to ensure that inquiry learning in PAI is implemented optimally and meets the needs of medical students. Institutionally, lecturers and students at the Muhammadiyah Medical Faculty must work together to provide integrated learning resources that bridge religious knowledge and health sciences. For example, learning modules, e-books, or journals are specifically designed for students at the Faculty

of Medicine, Muhammadiyah, Palembang. Inquiry learning requires advanced critical thinking and analytical skills. Not all Islamic Education students possess these skills from the outset. Students are accustomed to instructional learning methods that rely more on memorization. Therefore, shifting students' mindsets to inquiry-based and exploratory learning can be a challenge.

The development of Islamic Religious Education (PAI) teaching materials based on inquiry learning at the Faculty of Medicine has not received adequate institutional support. It continues to rely on lecturers' initiatives. Limited learning resources hinder students' development of critical and analytical thinking skills, while current learning methods are more memorization- and instruction-based. The lack of contextual literature complicates religious exploration and argumentation. Lecturer H emphasized the need for material relevant to the medical world, sourced from scientific journals, fatwas, and contemporary *ijtihad*, which requires time and a high level of literacy. Lecturer N added the importance of designing prompting and evaluation questions that assess the thinking process, not just the final answer. The success of this approach depends on the availability of references, collaboration with lecturers, institutional support, integrative modules, digital platforms, and pedagogical training for lecturers.

Class Management

The inquiry-based learning approach requires good classroom management from Islamic Education lecturers. Classroom management is needed to create a conducive learning environment (Krismoniansyah et al., 2021). From participatory observations and interviews, it was found that the ability of Islamic Education lecturers to manage their classes in science-based inquiry learning was:

Creating a Conducive Classroom Atmosphere

Lecturers must balance their students' freedom to learn, provide guidance, assign discussions, and present the results of group investigations to achieve learning objectives. Observations on October 6, 2024, revealed that the main challenge was maintaining focus during the discussion and ensuring all students participated. Although they had strong scientific backgrounds, they were not yet accustomed to reflective and exploratory learning in a religious context.

"Implementing an inquiry learning approach in Islamic Religious Education courses at the Faculty of Medicine, classroom management is a crucial aspect. Students must be encouraged to actively seek information, discuss, and express ideas. Therefore, as a lecturer, I need to ensure that the classroom atmosphere is conducive, communicative, and focused. This process is not linear and often involves group discussions, exploration of ideas, and collaborative problem-solving. Therefore, good classroom management is key to the successful implementation of this approach (A, 2024)."

The application of inquiry-based learning in Islamic Religious Education courses requires the lecturer to actively manage the class dynamically. They act as facilitators, creating a conducive and communicative atmosphere, managing discussion groups, providing intellectual stimulation, and ensuring discussions align with Islamic values. The learning process is cyclical and interactive, with exploration of ideas and collaborative work, so classroom management must be flexible yet structured to ensure learning objectives are achieved. The success of inquiry learning depends on the teacher's ability to manage classroom interactions, respond to discussion dynamics, and balance freedom of thought with the learning objective of eliciting diverse thinking from individual students (Sousa, 2021). As facilitators, lecturers need to create a conducive, structured, and flexible classroom atmosphere to support students' critical and reflective thinking.

Creating a communicative, informative, and effective classroom atmosphere

Communicative learning is carried out by lecturers who teach Islamic Education courses through discussion methods, appropriate time management, a focus on learning topics, and the use of digital media. S stated that:

"To manage the discussion, I divide students into small, heterogeneous groups so they can complement each other. I also establish class rules from the beginning of the lecture, such as presentation deadlines, rules for politely rebutting opinions, and constructive questioning. This is important to maintain a healthy and focused class dynamic (S, 2024)."

"In terms of time management, because lectures in the Faculty of Medicine are very limited, I usually divide the inquiry phase into several meetings. For example, the first meeting focuses on problem identification and question formulation, the second on data collection and analysis, and the third on presentation and reflection. This helps keep inquiry learning moving despite the limited study time (R, 2024)."

Interview results indicate that the successful implementation of the inquiry learning approach in Islamic Religious Education (PAI) courses is highly dependent on effective classroom management strategies and time management. The better the classroom management, the more effective the learning process will be in achieving its objectives (Hakim & Utami, 2021). Learning with an inquiry-based learning approach is an alternative in improving the quality of students that is relevant to the needs of a creative, innovative, and competitive industry by working together well (Doringin et al., 2020). Lecturer S emphasized the importance of grouping students into heterogeneous discussion groups in inquiry-based Islamic Religious Education (PAI) learning to enable them to collaborate and complement one another. Furthermore, establishing class rules from the outset, such as how to express opinions politely and constructively, serves as a foundation for creating healthy and focused classroom dynamics.

Lecturer R further stated that time management is achieved by dividing the stages of inquiry implementation into several meetings to accommodate the limited lecture duration. By dividing the stages from problem identification, data collection, and analysis, to presentation and reflection, lecturers can ensure that the inquiry process continues to run optimally. Planned and adaptive classroom management determines the effectiveness of the implementation of inquiry learning in Islamic Religious Education (PAI) for medical students. A combination of strategic grouping, clear classroom rules, and a realistic distribution of learning stages is key to maintaining the continuity of an active, participatory, and meaningful learning process, even within limited academic time.

Classroom management in inquiry learning can use digital media, such as online discussion platforms and learning videos, to enrich the material and maintain student engagement outside the classroom, a practice that has proven effective for learning (Aida et al., 2020). Management effectiveness is measured by active participation, the quality of questions, and the depth of student analysis, which increases over time. Lecturers organize discussion groups, observe interactions, and systematically design activity flows with constructive stimuli and feedback. In the Faculty of Medicine, this approach needs to be adapted to students' busy schedules and rational nature to ensure learning is more active, meaningful, and relevant to professional challenges.

In addition to managing discussions and time, utilizing digital media is also an effective classroom management strategy. The use of this medium has been shown to help maintain continuity in the inquiry process and increase student participation. In evaluating the effectiveness of classroom management, indicators used include: (1) active student participation, (2) the quality of questions asked, and (3) the depth of analysis during discussions. When these three aspects improve, it can be concluded that the classroom management strategy is working effectively. The use of digital media is one of the most effective classroom management strategies in supporting the inquiry learning approach. Lecturers can utilize various digital platforms. This strategy allows for

continuity in the inquiry process and provides more space for students, thus making student participation more equitable and interactive. Teachers can improve their skills through training without being limited by space and time. In the digital era, they can take online training (Apoko et al., 2024).

Ability to Conduct Class Evaluations

Evaluation of the effectiveness of class management strategies is carried out through several key indicators, namely: Active student participation, both in direct discussions and through digital platforms. Student involvement is evident in their opinions, answers, and responses; the quality of questions that contain critical thinking and Islamic-medical relevance; and the depth of analysis of scientific arguments and religious evidence in the context of medical practice. This shows that digital media integration is not only a technical tool but also a pedagogical bridge that supports the achievement of learning goals grounded in dialogue, exploration, and in-depth reflection. Overall, classroom management within the inquiry-based learning approach in Islamic Religious Education courses must bridge the gap between students' freedom of thought and systematic academic demands. This is especially important in a medical school environment accustomed to structured, data-driven learning systems.

The implementation of inquiry-based learning requires a paradigm shift in the classroom at the Faculty of Medicine, making students active actors in constructing knowledge. The lecturer's role as a facilitator is crucial to managing this process. Given students' habit of structured learning and reliance on scientific data, the inquiry approach in Islamic Religious Education courses is both a challenge and an opportunity. Effective classroom management must balance freedom of thought and systematic academic demands through clear learning paths, classroom rules, strategic grouping, and the use of technology. Good classroom management creates a safe space for critical thinking and contextual religious reflection, making inquiry learning a transformational learning experience.

Lecturer Skills in Managing Discussions

Actively facilitate the discussion

Inquiry learning involves open discussion groups, so Islamic Education lecturers must actively facilitate, ask critical questions, and maintain the relevance of the material to the world of medicine and religious teachings, so that students observe, reason, ask questions, discuss, and conclude the material appropriately. The relevance of the material in Islamic Religious Education to the world of medicine and religious teachings aims to encourage students to observe, reason, ask questions, discuss, and draw correct conclusions. Therefore, adjustments are needed to align the inquiry method with the religious values that must be taught so that learning remains effective and in accordance with the principles of Islamic Religious Education teachings, not only memorizing but also integrating values (Haikal & Anwar, 2024).

There is still a perception that religious education must be delivered dogmatically, with an emphasis on established values. However, in the context of inquiry-based scientific learning, especially within the Faculty of Medicine, I see the importance of opening up a space for healthy and critical discussion. Medical students are accustomed to scientific and systematic thinking, so a dogmatic approach is often ineffective in building deep understanding (N, 2024).

Lecturer N emphasized that while traditional views persist that religious education must be delivered dogmatically, this approach is less effective in the context of learning in the Faculty of Medicine. Given the nature of Medical Faculty students, who are accustomed to scientific and systematic thinking, the inquiry-based learning approach is considered more relevant and constructive. This approach opens up space for students to engage in critical discussions, explore

religious values more rationally, and develop a deeper and more contextual understanding of Islamic teachings within the medical profession.

"I recognize that discussion skills are crucial. I must be able to facilitate questions, provoke constructive arguments, and maintain the Islamic values that underpin learning. I don't believe that open discussion will interfere with religious values; rather, through discussion, students can discover for themselves the relevance of Islamic teachings to their academic and professional contexts. For example, when discussing Islamic issues, I encourage students to examine the evidence, compare fatwas (religious rulings), and see how principles can be applied in context. Here, I must be skilled at directing the discussion so that it doesn't stray into speculative or misleading topics, while still respecting the students' thought processes (R, 2024)."

Asking critical questions

Open discussions raise awareness of the relevance of Islamic teachings to medicine through the study of evidence, fatwas, and evaluation of sharia principles. Lecturers' skills in managing the direction of discussions are key to ensuring that students' critical thinking remains consistent rather than deviating. Inquiry learning is effective in Islamic Religious Education (PAI) when supported by pedagogical competence and lecturer sensitivity. The results of the observation showed that, while observing the process in one of the classes, the researcher faced resistance from students who considered the discussion too 'free' and from colleagues who were concerned that Islamic Education learning would become overly rational. Observations in Medicine show the challenges of implementing inquiry learning in Islamic Religious Education courses, with interactive dynamics but affective challenges, such as students who are afraid of making mistakes and are reluctant to discuss sensitive Islamic issues.

Furthermore, some students felt that this method opened up too much debate on matters that should be absolute or already established by religion. Discussion is not a form of defiance against teachings, but rather a means to deepen understanding and develop a reflective attitude toward current issues. He cited how universal Islamic values, such as 'adl (justice), hikmah (wisdom), and maslahah (common good), can serve as a framework for analyzing bioethical issues such as euthanasia, organ transplantation, and vaccination. Researchers noted that this approach enabled a productive two-way dialogue. Students gradually became engaged after being presented with open-ended questions related to medicine; lecturers guided complex reflection, and the search for scientific evidence and literature, and inquiry learning became an epistemological link between medical science and normative Islamic values. Overall, the researchers' observations confirm that the success of inquiry-based Islamic Religious Education (PAI) instruction is largely determined by the lecturer's pedagogical acumen in managing the dialogue space and their sensitivity in ensuring that discussions do not deviate from Islamic principles. Lecturers who can frame discussions in the spirit of scholarship and spirituality will more easily foster student engagement and a sense of ownership in the learning process.

"Openness and sensitivity are key. I provide space for students to ask questions, including questions that may sound 'bold'. However, I must also be ready to answer with a scientific, argumentative approach while remaining grounded and Islamic values. When students feel psychologically safe to ask questions, the inquiry process will run naturally (T, 2024).

Lecturer T's statement emphasized that when implementing the inquiry-based learning approach in the Islamic Religious Education (PAI) course, the lecturer's openness and sensitivity are key to the learning process's success. In the Faculty of Medicine, where students generally have strong scientific reasoning, high curiosity, and are accustomed to data- and evidence-based approaches, lecturers are required to be open to a wide range of questions, even those that may be considered sensitive or unusual in conventional religious learning.

Maintaining the relevance of the material to the world of medicine and religious teachings

As the lecturer for the Islamic Religious Education (PAI) course, Lecturer R emphasized the importance of facilitation skills in discussions, especially in implementing the inquiry learning approach. He realized that discussion is not just a means of exchanging opinions but also an active learning vehicle that allows students to construct their own knowledge through the exploration of evidence, comparative studies of fatwas, and applied analysis of Islamic principles in a professional context. Lecturer R positions himself not as the sole source of truth but as a facilitator who guides students' thinking. The ability to provoke critical questions, stimulate sound argumentation, and maintain the direction of discussions within the framework of Islamic values is an important part of the pedagogical competence he possesses and continues to develop. He also showed sensitivity to the potential for discussions to stray into speculative or deviant issues and therefore stressed the importance of limiting discussions to scientific and valuable topics.

In practice, lecturer R provides space for students to relate religious theory to medical practice, for example through discussions of Islamic ethical issues in health services, the principles of benefit and emergency in medical practice, and Islamic professional attitudes. This approach strengthens conceptual understanding of Islamic teachings, encouraging the internalization of values in real-life and work contexts. Interviews with Islamic Education lecturers revealed that implementing inquiry learning in instruction requires specialized skills in facilitating constructive academic discussions while remaining within Islamic values. Lecturers can enhance their abilities to improve the quality of learning, both as educators and facilitators (Helmawati et al., 2024). He needs to be able to stimulate the emergence of critical questions, encourage students' scientific arguments, and direct discussions so that they do not deviate from the Islamic principles that are the main foundation of learning.

DISCUSSION

Islamic Religious Education lecturers often face difficulties understanding and implementing a scientific approach grounded in inquiry-based learning. This is due to the different characteristics of normative religious material and the inquiry approach, which emphasizes exploration and discovery. The scientific approach in Islamic religious learning requires lecturers to develop methods and strategies that encourage students to think critically and deeply, so that they do not get caught up in blind imitation (Sunarko & Firdaus, 2021). Implementing an inquiry learning approach requires diverse and in-depth learning resources. However, in the context of Islamic Religious Education (PAI), access to relevant literature that supports the inquiry process is often limited. This presents a challenge for lecturers in developing learning materials that align with this approach.

Islamic Education learning through the inquiry model provides students with the opportunity to formulate problems and find answers, but requires adequate support from learning resources. In order to apply a scientific approach in Islamic religious education learning, many supporting factors are needed, such as the readiness of the teaching staff to adapt the learning method to the curriculum and scientific approach, supporting facilities such as adequate modules and tools, and the readiness of the government, in this case the Ministry of Education, Culture, Research and Technology and the Ministry of Religious Affairs, to support the implementation of a scientific approach in every student's learning. This research aims to identify alternative solutions for Islamic Religious Education learning using a scientific approach, particularly for concepts that are difficult to explain scientifically, such as Aqidah (R & Naufal, 2024).

Implementing a scientific approach in Islamic Religious Education (PAI) requires several interrelated supporting factors. The readiness of educators is a key factor in determining success. Lecturers must possess adequate pedagogical and methodological competencies to determine teaching methods appropriate to the demands of the scientific approach. This includes the ability to

develop learning activities based on observation, data collection, analysis, and reflection that are relevant to religious content, including topics traditionally considered more dogmatic, such as *aqidah*. A learning framework is needed to ensure students have an effective learning experience. This framework is: (1) there is interaction between students and lecturers, (2) interaction between students, (3) active learning based on experience, (4) using more time for assignments, and (5) enjoying various effective learning methods (Kistoro et al., 2023).

Furthermore, supporting facilities are needed, such as contextual and science-based learning modules, as well as learning aids like worksheets, technological devices, and representative literature from both scientific and religious perspectives. Another crucial factor is policy support from the government, specifically the Ministry of Education, Culture, Research, and Technology (Kemendikbud Ristek) and the Ministry of Religious Affairs (Kemenag). This support is needed in the form of regulations, curriculum policies, training, human resource development, and budgeting for the development of teaching materials relevant to the scientific approach. The inquiry learning approach requires effective classroom management to ensure discussions and explorations run smoothly (Limbong et al., 2024). Lecturers need the skills to manage classroom dynamics, assign roles, and maintain focus during discussions. Previous research has noted that the problems in implementing a scientific approach to Islamic Religious Education (PAI) learning include three challenges: teachers, students, and learning resources (Marjuki, 2020).

The inquiry focus requires students to actively participate in observing, asking questions, and experimenting, guiding the discussion to ensure it remains relevant to the learning objectives. The challenge is that lecturers must maintain control of the discussion without stifling creativity, ensuring that each question builds on the previous one towards a scientific understanding of religious concepts—thereby necessitating clear role allocation. Inquiry learning ideally involves small groups with defined roles (e.g., observer, note-taker, discussion leader). Lecturers should be able to develop effective group management strategies to optimize classroom dynamics and ensure focused, collaborative learning. During the learning process, it is crucial to prepare teaching materials such as student worksheets (LKS) and discussion rubrics. It guides observation, questioning, note-taking, and reasoning activities according to the scientific stages.

One of the main challenges in inquiry-based classroom management is ensuring all students are equally engaged at every stage of learning. The characteristics of inquiry learning, which demand active thinking, questioning, and reviewing, are often not equally addressed by all students. Some students tend to be passive, either due to a lack of confidence, limited resources, or unfamiliarity with open-mindedness in religious discussions. As a result, the dialogue process is often dominated by a handful of more active students, while others simply listen. In inquiry learning, discussions provide a space for intellectual exploration, but maintaining relevance and focus can be challenging. Students sometimes bring up interesting topics that are not aligned with the learning outcomes, such as delving into socio-political issues when discussing Islamic medical ethics.

Lecturers must actively guide the dialogue to ensure it remains on target, with assertiveness and class sensitivity. Clearly assigning roles within the group facilitator, note-taker, presenter, and critic is crucial to avoid overlap and enhance exploration outcomes. The quality of teaching materials, such as worksheets and rubrics, is also crucial but often lacking, making it difficult for students to navigate the stages of inquiry effectively. Inadequate teaching materials also make it difficult for lecturers to monitor learning outcomes objectively. Therefore, the development of learning instruments such as clinical case-based worksheets, argument analysis rubrics, and discussion concept maps is an urgent need to ensure the inquiry approach can be implemented systematically and purposefully. Lecturers' skills in facilitating discussions are crucial in the inquiry learning approach. Lecturers must be able to ask questions that stimulate critical thinking and guide discussions to remain aligned with Islamic values. Islamic Religious Education lecturers face challenges in integrating artificial intelligence and technology into their learning, which requires additional skills in managing discussions and interactions with students (Rozi et al., 2024).

Lecturers' skills in facilitating inquiry learning discussions emphasize students' active exploration: observing, asking questions, reasoning, and communicating their findings. In Islamic Religious Education (PAI) courses, lecturers' ability to facilitate critical and contextual discussions—their skills in facilitating inquiry-based learning discussions—is crucial. The inquiry-based learning approach emphasizes students' active exploration: observing, asking questions, reasoning, and communicating their findings. In Islamic Religious Education (PAI) courses, the lecturer's ability to facilitate critical and contextual discussions is crucial. Lecturers must guide the discussion and ensure Islamic values are maintained throughout the process. Discussion management is a key element in the inquiry learning approach, particularly in the context of Islamic Religious Education (PAI).

Lecturers are required to ask questions that stimulate critical thinking while maintaining relevance and an Islamic nuance in the discussion. The challenge becomes even more complex as technology and artificial intelligence (AI) are integrated into the learning process. This requires lecturers to develop new competencies, such as digital moderation skills, AI content validation, and discussion design that integrates science, ethics, and religious values. Thus, the success of the inquiry-based learning approach in Islamic Religious Education (PAI) depends heavily on lecturers' preparedness, both pedagogically and technologically. Support for improving lecturer capacity through training in critical discussion facilitation skills and digital literacy is crucial to ensure learning remains high-quality, contextual, and grounded in Islamic teachings.

CONCLUSION

Islamic Religious Education lecturers who teach at the Faculty of Medicine in implementing a science-based inquiry approach face challenges in several aspects, such as limited relevant learning resources, difficulties in integrating scientific approaches with normative religious materials, the need for discussion facilitation integrated with digital technology, science-based classroom management skills, and the need for a culture of independent learning among students based on digital learning technology. The findings of this study have positive implications for the development of materials, methods, and approaches for future Islamic Religious Education subjects for students of the Faculty of Medicine. The campus provides a forum for digital learning technology literacy training for Islamic Religious Education teachers at the Faculty of Medicine. Researchers recommend that lecturers integrate Islamic Religious Education (PAI) content with scientific material by collaborating with lecturers from other subjects at the Faculty of Medicine to implement science-based inquiry learning.

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