

Original Article

Integration of Science and Religion in Islamic Religious EducationAbdul Latif Harahap^{1*}, Rahmawati Nasution¹¹ IAIN Padangsidempuan*Corresponding author: abdulatifharapan@gmail.com**Abstract**

Islamic Religious Education (PAI) plays a strategic role in developing a generation that is not only intellectually intelligent but also possesses faith and noble morals. One relevant approach is the integration of science and religion, which aims to align spiritual values with scientific advancement. This integration is based on the concept of monotheism as a foundation, which affirms that there is no contradiction between God's revelation and true science. In the context of PAI, this integration can be realized through the study of Quranic verses relevant to scientific phenomena, the teaching of scientific ethics based on Islamic values, and a contextual learning approach. With this approach, students are expected not only to understand Islamic teachings in depth but also to be able to apply them in social life. However, this integration faces various challenges, such as curriculum gaps and limited competency of educators. Therefore, synergy is needed between educational institutions, educators, and educational policies to realize a holistic education.

Keywords: Islamic Religious Education, Integration, Science, Religion, Scientific ethics

Introduction

Education is considered a key milestone in shaping an individual's character and personality, which in turn plays a crucial role in the development of society and the nation (Rohmah, 2023: pp. 154-165). With the rapid development of the times, the challenges facing education are increasingly complex. One of the main challenges is how to harmonize science and spiritual values within an education system.

The integration of digital science and technology with Islamic education is a relevant and crucial need, highlighting the importance of education, teaching, and training in human life. Therefore, the Islamic education system requires the integration of religious knowledge and science (Saiful, 2023: pp. 1100-1107). In this context, the integration of science and religion is a serious concern, especially given the growing need for individuals who are not only intellectually competent but also possess strong morals and ethics. Education that relies solely on cognitive development without addressing the spiritual dimension can create an imbalance in personal development.



Integration that merely superficially matches Quranic verses with scientific findings cannot be considered an integration of religious and general knowledge. Integration between religious and general knowledge does not demean or elevate one or the other, and the true purpose of both is to enhance faith (Fitriwa, 2022: pp. 282-287). This is where constructive integration is crucial, whereby religious and general knowledge can be developed within Islamic educational institutions. Islam is rooted in the Quran and Hadith, which contain guidelines for life and knowledge. The development of general knowledge is truly utilized to improve human well-being. The importance of integrating science and religion in education emerges as a solution to balance the intellectual and spiritual needs of individuals. This integration is not an attempt to eliminate the role of science or religion, but rather to create harmony and complementarity between the two. This acknowledges that scientific wisdom and religious values have their own unique contributions to shaping individual character and morals.

In the context of an increasingly pluralistic society, the integration of science and religion in education can also play a role in building tolerance, respecting differences, and creating an inclusive learning environment (Shofiyah, et.al., 2023: pp. 66-77). By understanding religious values deeply, individuals can better appreciate diversity and accept differences between individuals. Islamic religious education, as an integral element in the educational framework, has great potential to bring these benefits to society (Siddik, 2018). Therefore, research and implementation of educational approaches that combine science and religion are crucial. By formulating the right approach, Islamic religious education can become a pillar that strengthens Islamic values while remaining open to science and developments.

Literature Review

The integration of science and religion in Islamic Religious Education (PAI) is a strategic approach to educational development that aims to shape students who are not only intellectually intelligent but also spiritually mature. This approach emphasizes a balance between mastering general knowledge and practicing religious values in everyday life. Several previous studies have highlighted the importance of integrating religious education and science in the school context, for example through the teaching of moral values in general subjects or the implementation of learning methods that emphasize ethics and morality (Sutrisno, 2018; Hidayat, 2019). These studies emphasize that such integration can increase students' religious awareness while facilitating the development of cognitive and critical thinking skills.

However, most previous research remains normative and theoretical, focusing on the concept of integration without emphasizing its practical implementation in the classroom or its impact on student attitudes and behavior. Some studies emphasize religious instruction as a separate subject, thus limiting the integration of science and religion to the partial teaching of moral values (Rahmawati, 2020; Fitriani, 2021). This indicates a significant research gap, namely the need for studies that systematically and holistically examine integration, both in the curriculum, teaching methods, and learning evaluation, so that its impact on the formation of character, morals, and student mastery of knowledge can be clearly seen.

Research on the integration of science and religion in Islamic Religious Education emphasizes a learning approach that integrates religious material with general knowledge in a contextual and applicable manner. For example, the concept of monotheism can be linked to a scientific understanding of the universe, or the principles of honesty and trustworthiness can be taught alongside project management practices and academic responsibility. This approach not only equips students with knowledge

but also fosters character development based on religious values and scientific ethics. Therefore, this research differs from previous studies because it emphasizes the practical integration of science and religion in Islamic Religious Education learning, rather than simply teaching religious theory or moral values separately. This allows for empirical evaluation of its relevance and impact on educational quality and student character development.

Research Methods

This study uses a library research method to examine Islamic religious education (PAI) and the integration of science with religion. This method involves collecting and analyzing data from various written sources such as books, scientific journals, articles, and research reports related to the topic under study (Zed, 2004). The library research method was chosen because it allows researchers to gain an in-depth understanding of the topic under study through various perspectives presented in the existing literature. Furthermore, this method also allows researchers to identify research gaps that can be filled by further studies. This library research method provides a strong foundation for understanding how Islamic religious education (PAI) and the integration of science with religion are developed and helps identify strategies that can be adopted to address existing challenges.

The steps taken in this research include: *First*, source identification, identifying library sources relevant to the research topic, including academic books, journal articles, and previous research reports that discuss Islamic religious education (PAI) and the integration of science with religion. *Second*, data collection, collecting data and information from the sources that have been identified. The data collected includes the development of Islamic religious education (PAI) and the integration of science with religion. *Third*, data analysis, analyzing the data obtained using qualitative analysis techniques. The analysis is carried out by reading sources in the form of books and journal articles critically, then compiling the results of the reading critically into a discussion that is in accordance with the focus of this research. *Fourth*, synthesis of findings, synthesizing findings from various sources to obtain a comprehensive picture of the development of Islamic religious education (PAI) and the integration of science with religion. The results of this synthesis are used to compile conclusions and recommendations. Furthermore, to check the validity of the data, the researcher conducted source triangulation, namely the researcher compared the findings from one reference with another reference.

The Concept of Islamic Religious Education and Scientific Integration

1. The Concept of Islamic Religious Education

The Islamic Religious Education curriculum aims to shape character in accordance with Islamic teachings. This goal includes developing attitudes such as patience, honesty, compassion, mutual assistance, and justice, which are values enshrined in Islam. One of the main goals of Islamic Religious Education is to provide students with a deep understanding of Islamic teachings (Hipi, N., & Yahiji, K., 2021: pp. 1-16). This includes understanding basic Islamic concepts such as *aqidah* (belief), *ibadah* (worship), *muamalah* (social relationships), and *akhlak* (morality).

Islamic Religious Education also aims to teach messages of peace, tolerance, and harmony between religious communities. This is done by emphasizing universal values such as mutual respect, appreciation of diversity, and cooperation in building a harmonious society (Hipi, N et. al. 2021: pp. 336-346). Another important goal of

Islamic Religious Education is to develop students' spiritual awareness. This involves establishing a close relationship between individuals and Allah SWT. strengthening faith, and deepening spiritual experiences in daily life.

Islamic Religious Education aims to develop critical and analytical thinking skills in students. This involves the ability to understand, analyze, and interpret various verses of the Quran and Hadith, and relate them to the context of contemporary life (Firmansyah, 2023: pp. 15-27). Empowering Islamic morals and ethics necessarily encompasses various aspects of life. Islamic Religious Education teaches students to apply Islamic values in all aspects of life, including personal, family, community, and national life.

2. Integration of Science and Religion

According to Syed Muhammad Naquib al-Attas and Ian G Barbour in Muslih, the relationship between science and religion is that there is a link between the two in history experiencing clashes. For Islamic science, religion is inherently inseparable from science. Islamic science adheres to *d â Ğ* or religion. Islam is based on the revelation of the holy book, the Quran (Muslih, et. al., 2022: pp. 20-35). The concept of integration between several sciences tends to imitate and adopt the concept of Western science. Muslims tend to imitate and adopt the concept of Western science blindly (Lubis, 2022: pp. 174-180). Therefore, efforts to explore and develop the concept of science in the Quran can be an object of study of a very broad science, not a narrow view like modern science which tends to focus on knowledge of the physical world.

This tendency to adopt Western science is included in the Islamic reform movement, which, according to Harun Nasution, is defined as anything that has not yet been understood, accepted, or implemented, but rather as an effort to improve conditions, both in terms of methods and concepts, and methods to achieve a better life (Karyasa, 2023: p. 56). According to Harun Nasution, the relationship between science and religion can be traced to three perspectives. First, the view on the position of reason in Islam. Second, the theology of the *sunnatullah*. And third, the role of Islamic teachings in the development of science. Reason is one of the foundations of the Islamic religion, so a person's faith will not be perfect if it is not based on reason.

The concept of integration must truly begin in the mind, understanding, and even belief. Muslims who adhere firmly to the Quran and Sunnah should be able to understand and even believe that the spirit and concept of integration are generally contained in Islamic teachings (Hopid, 2021: pp. 97-114). The concept of integrating science and religion involves efforts to unite two important dimensions of human life: the intellectual dimension (science) and the spiritual dimension (religion). The integration of science and religion within the educational context is of great significance and provides a strong moral foundation for the development of individuals who are not only intellectually intelligent but also possess strong morals and ethics.

The concept of integrating science and religion emphasizes that science and religious values can actually complement each other and contribute positively to one another. Science provides an understanding of the physical world, while religion provides a view of the meaning of life and morality that serves as a guide in facing that reality (Meliani, et.al, 2021: pp. 673-688). This integration aims to create harmony between the knowledge gained from science and the moral and spiritual values found in religious teachings. The integration of science and religion in the context of education is of great significance. It provides a foundation for the development of individuals who are not only intellectually intelligent but also possess strong morals and ethics.

The influence of dualism between science and religion often results in an imbalance in human understanding and experience. The integration of science and religion is expected to overcome this dualism, avoid conflicts between rational knowledge and spiritual values, and create a holistic vision of the world (Wattimena, 2020). By combining knowledge and religious values, education can become a means of forming balanced and ethical character. By combining knowledge and religious values, education can become a means of forming balanced and ethical character.

The integration of science and religion in education involves the development of a curriculum that combines scientific material with religious values (Yusuf, 2023: pp. 119-133). This involves developing learning methods that combine scientific aspects with the application of moral and spiritual values in everyday life. In the context of Islamic Religious Education, the integration of science and religion is at the core of the educational mission (Nurlaeli, 2020). Islamic Religious Education is expected to bridge general knowledge and Islamic values, ensuring that graduates are not only academically competent but also possess a solid moral foundation.

3. Islamic Religious Education in Building the Integration of Science and Religion

Islamic values-based learning refers to an approach to learning that integrates subject matter with Islamic values and principles. This involves integrating Islamic teachings into every aspect of learning, including content, teaching methods, and classroom interactions. The main principles of Islamic values-based learning are:

- a. Tauhid (Oneness of Allah): Learning is designed to strengthen belief in the oneness of Allah SWT. and its implications in everyday life;
- b. Adab (Ethics): Education emphasizes the importance of Islamic ethics in social interactions, such as politeness, helping each other, and respecting the rights of fellow human beings;
- c. Akhlaq (Morality): Introducing and strengthening Islamic moral values such as honesty, justice, compassion, and patience; and
- d. Ihsan (Generosity): Encouraging students to do good to fellow human beings and other creatures of Allah, and to provide the best service in every aspect of life (Naila et.al., 2024: pp 65-77).

Learning methods used in Islamic values-based learning:

- a. Case Studies: Using case studies to discuss real-life situations that can strengthen the understanding of Islamic values;
- b. Group Discussion: Adopting group discussion to facilitate reflection, exchange of ideas, and decision-making based on Islamic values;
- c. Simulation: Conducting simulations of real-life situations that require the application of Islamic values in decision-making; dan
- d. Project Based Learning: Providing challenging projects to develop practical skills while reinforcing Islamic values (Pertiwi, et. Al, 2022: pp 8839-8848).

Integrating Islamic values into the curriculum involves adapting subject matter to Islamic principles, developing teaching materials relevant to Islamic values, and developing evaluations that consider moral and ethical aspects. The role of teachers in Islamic values-based learning is crucial. Teachers play a central role in guiding students in understanding and applying Islamic values in their daily lives. Teachers also serve as role models who practice Islamic teachings in their daily behavior and actions.

Islamic values-based learning aims to shape individuals who are not only academically competent but also possess strong moral and ethical character in accordance with Islamic teachings. By utilizing appropriate learning methods and integrating Islamic values into the curriculum, it is hoped that education can become a means to shape a generation that is qualified and beneficial to society. Islamic religious education plays a crucial role in developing critical thinking by teaching students to question, analyze, and critically interpret the sacred texts of the Quran and Hadith (Andriani et al., 2022). Furthermore, Islamic religious education also encourages students to consider the moral and ethical implications of Islamic teachings in the context of everyday life.

Critical thinking is a core competency necessary to navigate the complexities of the modern world. The ability to think critically enables individuals to become lifelong learners, navigate complex challenges, and make evidence-based decisions (Firmansyah et al., 2022: pp. 1221-1240). Understanding science and religion simultaneously can encourage students to think critically about social phenomena. Critical thinking is the ability to question, analyze, and evaluate information objectively and rationally. It involves identifying valid arguments, recognizing biases, and considering multiple perspectives before making a decision or reaching an opinion.

Strategies for developing students' critical thinking can be carried out with the following learning activities:

- a. Guided Discussion: Holding structured discussions to introduce students to different points of view and encourage them to question and test ideas;
- b. Case Studies: Using real-life case studies to challenge students to analyze information, identify problems, and generate evidence-based solutions;
- c. Simulation: Conducting simulations of real-life situations that require critical decision-making and problem-solving; and
- d. Research-Based Projects: Provide projects that allow students to investigate complex problems, collect and analyze data, and draw conclusions based on the evidence they find.

Impact, Challenges and Strategies of Integration of Science and Religion

4. Positive Impacts of Integration of Science and Religion

Islam and science are not opposites, but rather an inseparable whole that complements each other, or what we might call integration. The positive impacts of integrating science and religion include:

- a. Building a Strong Character: By integrating scientific knowledge with religious values, individuals become more skilled at understanding and applying moral and ethical principles in their daily lives (Hasana et.al., 2024: pp. 81-99). This helps strengthen integrity, honesty, patience, and empathy, which are character traits valued in religious teachings;
- b. Increased Spiritual Awareness: By studying and understanding spiritual values in the context of everyday life, individuals become more connected to their spiritual dimension (Sulaiman, 2020: pp. 96-110). This can provide a profound sense of peace, happiness, and satisfaction in life, as well as provide a clear direction in life;
- c. Developing an Attitude of Tolerance and Openness: By understanding and appreciating the values of other religions and diverse religious perspectives, individuals become better able to establish harmonious relationships with others, even those with differing beliefs (Mustafida, 2020: 173-185). This has a positive

- impact on strengthening social diversity and building an inclusive society;
- d. Improving the Quality of Community Life: By having individuals with strong character, spiritual awareness, and tolerance, society becomes more stable, harmonious, and empowered (Kusumawati, 2024: pp. 1-7). This creates a conducive environment for the growth and development of all members of society; and
 - e. Contribution to the Achievement of Sustainable Development Goals: The integration of science and religion also has a positive impact in contributing to the achievement of sustainable development goals (Nudin, 2020: pp. 63-74). By strengthening morality, ethics, and a sense of social responsibility, individuals involved in this integration are more likely to contribute to sustainable social, economic, and environmental development.

By understanding the positive impacts of the integration of science and religion, we can strengthen our commitment to strengthening this integration in the education system and society at large, thereby providing significant benefits for the development of individuals and society based on religious values.

5. The Challenge of Integrating Science and Religion

The challenges and obstacles faced in implementing the integration of science and religion in the development of Islamic religious education are:

- a. Differences in Interpretation and Understanding: The main challenge in implementing the integration of science and religion is the differences in interpretation and understanding of religious values and how they are integrated with scientific knowledge (Jamil, 2023: pp. 111-120). Each individual or group may have different views on how this integration should be carried out, which can hinder consensus and cohesion in the learning process;
- b. Resistance to Change: The implementation of science and religion integration is often faced with resistance to change from various parties, including teachers, students, parents, and even educational institutions themselves (Khoirotunnisa et.al., 2024: pp. 209-224). Discomfort regarding the integration of religious values into the established curriculum or resistance to changes in educational paradigms can be a serious obstacle in achieving the desired integration;
- c. Lack of Resources and Support: Another challenge is the lack of adequate resources and support to implement the integration of science and religion (Nopridarti, 2023: pp. 256-265). This includes the availability of learning materials, teacher training, learning facilities, and support from educational authorities and the wider community. This lack of resources can limit the ability of educational institutions to implement integration effectively;
- d. Difficulties in Evaluation and Assessment: The integration of science and religion may face difficulties in the evaluation and assessment process. Assessment standards typically used in general education may not be fully relevant or able to accurately measure the achievement of science and religion integration (Jannah & Ristianah, 2024: pp. 121-128). This requires the development of assessment instruments that align with the goals of integration and can provide an accurate picture of student progress; and
- e. Imbalance Between Science and Religion: There are challenges in achieving the right balance between science and religion in the educational process (Syafi'i). Overemphasizing one aspect can lead to imbalances in student development, such as deficiencies in critical thinking skills or a lack of understanding of moral

and ethical values.

By understanding these challenges and obstacles, appropriate strategies and approaches can be designed to overcome each obstacle and facilitate the implementation of more effective integration of science and religion in the education system.

6. Strategy for Integrating Science and Religion

Strategies to overcome challenges and obstacles to implementing the integration of science and religion include:

- a. **Raising Awareness and Understanding:** One key strategy is to raise awareness and understanding of the importance of integrating science and religion among all educational stakeholders, including teachers, students, parents, and educational institutions. This can be done through outreach, training, and open discussions about the benefits and goals of such integration (Wahid & Khouilita, 2023: pp. 696-711);
- b. **Relevant Curriculum Development:** It is important to develop a relevant and well-integrated curriculum that combines science subject matter with religious values (Sari, 2023: pp. 131-141). This curriculum should be designed with the needs and uniqueness of learners in mind, and should include diverse learning approaches to facilitate effective integration;
- c. **Training and Professional Development:** Teachers need to receive adequate training and professional development regarding the integration of science and religion (Namora et al., 2023). This training should include effective learning strategies, an understanding of religious values, and skills in overcoming obstacles that may arise during the implementation process;
- d. **Establishing Partnerships and Networks:** Building partnerships and networks between educational institutions, religious communities, and the wider community is crucial (Siregar, 2021). This collaboration can help secure support, resources, and a better understanding of local needs in facilitating the integration of science and religion;
- e. **Adequate Resource Provision:** Efforts are needed to provide adequate resources, including textbooks, learning materials, learning facilities, and technology that support the implementation of science and religion integration. This can involve investments from the government, educational institutions, and the community to ensure the availability of the necessary resources (Yuniarti, et al. 2023: pp. 182-207); and
- f. **Promoting Inclusivity and Tolerance:** This strategy involves promoting inclusivity and tolerance in educational environments, where differences in beliefs and views are valued and acknowledged.

By implementing these strategies holistically and sustainably, it is hoped that challenges and obstacles in implementing the integration of science and religion can be overcome, thereby creating an educational environment that is inclusive, empowering, and based on universal values.

Conclusion

The integration of science and religion in the context of modern education has a significant impact on the formation of individual character and creates a holistic educational environment. Islamic Religious Education makes an important contribution in building the integration of science and religion in modern education. Through Islamic teachings, students are given a deep understanding of spiritual and moral values that can be combined with scientific knowledge, creating harmony between the intellectual and spiritual dimensions in the learning process. Positive Impact on the Formation of Individual Character: The integration of science and religion has a significant positive impact on the formation of individual character in the education system. Through this integration, individuals are not only taught to be academically intelligent, but also shaped into individuals with strong morality, ethics, and spiritual awareness. This has a positive impact on the development of a strong character based on religious values.

Islamic religious education can be effectively implemented to enhance the integration of science and religion in educational institutions through various strategies, such as developing relevant curricula, training teachers, establishing partnerships with religious communities, and promoting inclusivity in educational settings. By strengthening the infrastructure of Islamic religious education and ensuring adequate support from various stakeholders, the integration of science and religion can be more effectively realized.

Thus, through joint efforts in overcoming challenges and obstacles, as well as implementing appropriate strategies, the integration of science and religion in education can be a source of success in forming individuals who are qualified, have a strong character, and are able to face the complexities of the modern world wisely.

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