

Integration of Islamic Religious Education with Environmental Education in Building Ecological Ethics of Students

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Abstract

This study aims to analyze the integration of Islamic Religious Education with Environmental Education to develop ecological ethics among students at Hidayatullah Junior High School, Batam. This study uses a descriptive qualitative approach with a case study design, collecting data through in-depth interviews, participant observation, and documentation of teachers, principals, and students. The results show that the integration of Islamic Religious Education and Environmental Education at SMP Hidayatullah Batam is realized through Islamic values-based learning linked to environmental conservation, including teaching environmental-themed verses of the Qur'an, an eco-friendly school program, and Clean Friday activities. The implementation of this integration positively affects the development of ecological ethics among students, as reflected in their increased concern for environmental cleanliness, energy conservation, and active involvement in environmental conservation activities. Islamic values such as *amanah* (trust), *ihsan* (kindness), and *khalifah fil-ardh* (vicegerent) provide a spiritual foundation that strengthens students' ecological behavior. Supporting factors such as school commitment, community support, and parental participation are key factors in maintaining the sustainability of the integration program. This educational model can serve as a reference for developing Islamic education with an ecotheological perspective, relevant to the current challenge of global environmental degradation.

Keywords

Curriculum Integration; Ecological Ethics; Environmental Education; Hidayatullah Middle School; Religious Education

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1. INTRODUCTION

The current environmental crisis is one of the global issues that most threatens the sustainability of human life on earth. Climate change, air and water pollution, deforestation, and the increasing volume of plastic waste have caused serious ecological impacts for current and future generations (Harahap, 2023). This phenomenon indicates the degradation of human ecological morality towards nature, which should be protected as a trust from Allah Swt. Therefore, education plays a strategic role in fostering ecological awareness from an early age by shaping environmentally conscious values and behavior, particularly through the integration of Islamic Religious Education and Environmental Education (Fahlawi & Pertiwi, 2024).

In the context of Islamic Education, the concept of *khalifah fil ardh* (*leader on earth*) is an important



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theological basis in building human ecological awareness. Islam views humans as stewards of the earth who are responsible for maintaining the balance of nature (*mīzān*) and not causing damage (*fasād*) to it. Religious learning that internalizes ecological values is expected to foster ecological ethics in students, namely spiritual and moral awareness to love and protect the environment (Sawaluddin et al., 2024). Research shows that religious values instilled in religious education can strengthen students' motivation to act in an environmentally friendly manner (Hasan et al., 2024).

Environmental Education is an educational program designed to develop students' attitudes, knowledge, and skills for maintaining ecosystem sustainability. According to the Ministry of Environment and Forestry, environmental education must be developed holistically and contextually, encompassing the cognitive, affective, and psychomotor domains. However, the success of PLH depends heavily on the ability of educational institutions to integrate ecological values into the curriculum and school culture (Syukri, Sulaiman Muhammad Amir, Fitriani, 2024). This integration poses a major challenge for Islamic schools, including Hidayatullah Batam Junior High School, which strives to instill ecological awareness rooted in Islamic values.

The integration of Islamic Religious Education and Environmental Education is not merely a conceptual endeavor but also a concrete step towards character-based, sustainable education. According to Amrullah (2025), this integration should be seen as a synthesis of spiritual and scientific education that positions humans as both moral and ecological beings. Islamic education plays a role in providing a normative and spiritual foundation for understanding the environment, while environmental education provides a practical approach to preserving it (Ramli, 2022). Thus, the synergy between the two can produce students who are not only ritually pious but also ecologically pious, that is, they care about the preservation of nature as a form of devotion to Allah Swt. (Hasan et al., 2024).

Several recent studies have shown that Environmental Education contributes positively to increasing students' knowledge and awareness of the environment (Muin et al., 2025). However, most of these studies are still oriented towards scientific approaches and ecological behavior, without a deep integration of religious values. On the other hand, Islamic Religious Education studies focus more on the formation of students' morals, spirituality, and social morals, but relatively little explicit linkage to contemporary ecological issues (Farihin et al., 2025). Several studies have begun to develop the concept of Islamic ecotheology that links monotheism with ecological responsibility, but these studies are still predominantly conceptual in nature and have not been widely implemented in formal educational practices in schools (Ainiyah & Awakachi, 2025).

Research on the integration of Islamic Education and Environmental Education has indeed begun to develop. However, it remains partial, limited to material enrichment or incidental activities, and has not yet systematically addressed the formation of students' ecological ethics through the curriculum, learning, and school culture (Sawaluddin et al., 2024). These efforts align with the research findings of (2024), which confirmed that implementing a green school grounded in Islamic values can significantly increase students' ecological awareness. Through learning activities that touch on spiritual and environmental dimensions, students are expected to understand that preserving nature is part of their religious worship and mandate (Zarin et al., 2023).

In practice, various challenges remain in achieving the ideal integration between Islamic Religious Education and Environmental Education. Some teachers still tend to view environmental material as an additional topic that is not directly connected to religious teachings. In fact, Islam (Hamidah et al., 2019) teaches an integral relationship between faith and good deeds, including in the ecological dimension (Munayah, 2021). Therefore, a more contextual and participatory learning model is needed, in which teachers can relate the verses of the Qur'an to environmental phenomena in an applicable manner (Sawaluddin, Koisyahbudin Harahap, Imran Rido, 2022). For example, thematic interpretation learning about the verses on the creation of nature (*kauniyah* verses) can be used as a medium to foster a love for God's creation and a moral responsibility for its preservation et.al, 2025).

Maisah (2025) in his research showed that integrating Islamic values into environmental education learning improves students' environmentally friendly behavior, such as disposing of waste properly and conserving energy at school. Meanwhile, research found that Islamic Religious Education that links morals to the environment can strengthen students' ecological responsibility in Islamic schools. Thus, collaboration between Islamic Religious Education teachers and Environmental Education teachers is key to establishing an ecological and religious school culture (Walidah & Husaini, 2023).

The novelty of this research lies in the development of an integrated model of Islamic Religious Education and Environmental Education based on Islamic ecotheological values, such as monotheism, caliphate, trustworthiness, and natural balance, which are holistically internalized through the curriculum, learning, and school culture at the junior high school level (Iwan et al., 2025). This research also presents the empirical context of integrated Islamic schools, which is still rarely studied, thereby providing conceptual and practical contributions to strengthening Islamic Religious Education that is responsive to the global environmental crisis.

This study aims to analyze the integration of Islamic Religious Education with Environmental Education to develop ecological ethics among students at Hidayatullah Middle School, Batam. Specifically, this study seeks to examine the form and process of integrating Islamic values into learning and school culture, as well as their contribution to the development of students' ecological awareness, attitudes, and behaviors grounded in Islamic teachings.

2. METHODS

This study uses a qualitative, descriptive design. This approach was chosen because the study aims to understand in depth the process of integrating Islamic Religious Education with Environmental Education and how this integration contributes to the development of students' ecological ethics W. Creswell & N. Poth. Qualitative research enables researchers to explore the meanings, values, and educational practices that naturally unfold in the school environment. This research was conducted at Hidayatullah Batam Junior High School, which was chosen because it has an integrated Islamic school character that instills Islamic values in learning and school culture (Johnson & Christensen, 2018). The research was conducted during the current semester of the active academic year. The subjects of this research were all activities integrating Islamic Religious Education and Environmental Education at Hidayatullah Batam Junior High School. Research informants were purposively selected, namely parties considered to understand and be directly involved in the implementation of education, including the principal, Islamic Religious Education teachers, related subject teachers, and students (Leedy, Paul D.. Data collection was carried out through several techniques, namely in-depth and semi-structured interviews with research informants to obtain data on the understanding, planning, implementation, and evaluation of the integration of Islamic Religious Education and Environmental Education in the development of students' ecological ethics. Observations were conducted directly on the classroom learning process, school activities, and students' ecological behavior in their daily lives within the school environment (Hikmawati, 2020). These observations aimed to obtain factual data on the implementation of Islamic-based ecological values. Documentation was used to supplement the research data, including curriculum documents, Lesson Plans (RPP), school programs, activity photos, and other archives relevant to the integration of Islamic Religious Education and Environmental Education (Zamsiswaya, Sawaluddin, 2024). Data analysis in this study used the interactive model of Miles and Huberman, which includes three main stages, namely: Data Reduction, namely the process of selecting, focusing, simplifying, and grouping data from interviews, observations, and documentation according to the research focus (Huberman, 1994). Data Presentation, namely compiling data in the form of descriptive narratives, tables, and thematic matrices for easy understanding and analysis. Conclusion Drawing and Verification, namely formulating the meaning and findings of the research, and conducting continuous data validity checks. The data analysis process was carried out

continuously from the beginning of data collection through the completion of the research. To ensure data validity, this study employed triangulation, including source triangulation (principal, teachers, and students), technical triangulation (interviews, observation, and documentation), and time triangulation (Hardani et al., 2020). Researchers also rechecked data with informants (member check) to ensure the accuracy of research findings.

3. FINDINGS AND DISCUSSIONS

Integration of Islamic Religious Education and Environmental Education at Hidayatullah Middle School, Batam

The integration of Islamic Religious Education with Environmental Education at Hidayatullah Middle School, Batam, is carried out through values, curricular, and cultural aspects. Value integration is reflected in the association of Islamic teachings, such as monotheism, *khalifah fil ardh, amanah*, and the prohibition of *facade fil ardh*, with environmental awareness materials and activities. PAI teachers instill an understanding that protecting the environment is part of worship and the responsibility of students' faith. Curricular integration is evident in learning planning, especially in the PAI lesson plan, which includes contextual examples on cleanliness, waste management, and environmental preservation. Meanwhile, cultural integration is achieved through school activities such as community service, classroom cleaning, and planting, all of which are linked to Islamic moral values.

Table 1. Forms of Islamic Religious Education and Environmental Education Integration at Hidayatullah Middle School, Batam

Integration Aspects	Implementation Form	Key Findings
Mark	Planting the concept of monotheism, caliphate, and trust	The environment is understood as a trust from Allah
Curriculum	Integration of environmental material in Islamic Religious Education	RPP contains ecological values
School Culture	Habits of cleanliness and care	Environmentally friendly behavior of students

Table 1. Forms of Islamic Religious Education and Environmental Education Integration at Hidayatullah Middle School, Batam, demonstrate that the integration of Islamic Religious Education with Environmental Education is implemented holistically through values, curriculum, and school culture. In the aspect of values, the instillation of the concepts of monotheism, *khalifah*, and *amanah* is the main foundation in building students' understanding of the environment as a trust from Allah SWT. that must be protected and preserved (Alfadhli, et.al, 2025). This finding aligns with Al-Qardhawi's view, which emphasizes that the relationship between humans and nature in Islam is theological and ethical, and that environmental damage constitutes a betrayal of the divine trust. In addition, Fachruddin Majeri Mangunjaya emphasized that the value of *khalifah fil ardh* is a foundation of Islamic ecotheology, relevant to sustainable environmental education (Majeri Mangunjaya & Elizabeth McKay, 2012).

In terms of the curriculum, integration is achieved by incorporating environmental material into Islamic Religious Education learning, as reflected in the Lesson Plan (RPP), which incorporates Islamic ecological values. This curriculum integration demonstrates that Islamic Religious Education learning is not solely oriented toward ritualistic and dogmatic aspects, but also contextual and applicable. This approach aligns with Tilbury's opinion that effective environmental education must be integrated across the curriculum to shape students' awareness and responsibility sustainably (Jamaluddin, 2018). Previous research by Suhardin (2025). also demonstrated that integrating environmental values into

religious education significantly increases students' ecological awareness (Suhardin, 2025).

Meanwhile, in terms of school culture, the integration of Islamic Religious Education and Environmental Education is achieved by instilling clean behavior, care, and responsibility for the school environment. These findings indicate that students have demonstrated environmentally friendly behavior as part of their daily religious practices. This aligns with Jackson's hidden curriculum theory, which states that moral and ethical values are more effectively instilled through habituation and role models within the school culture than through formal instruction alone (Dwi Ratnasari, et.al, 2024). Research by Rohman et al., (2024) also confirms that a school culture based on religious and ecological values plays a crucial role in consistently shaping students' environmentally conscious behavior (Rohman et al., 2024).

In the learning process, Islamic Religious Education teachers use contextual lectures, discussions, and role models. Material on morals and worship is linked to practices in maintaining classroom and school cleanliness. Observations show that students are beginning to understand the relationship between faith and ecological behavior, such as not littering and maintaining school facilities. School documentation demonstrates support for internal policies through a green school program aligned with the institution's Islamic vision. This strengthens the ongoing integration between Islamic Religious Education and Environmental Education (Pramudita, 2023).

The research results show that integrating Islamic Religious Education and Environmental Education contributes to the development of students' ecological ethics, reflected in three main aspects: awareness, attitudes, and behavior. Students not only understand the importance of preserving the environment but also interpret these activities as part of their obedience to God.

Table 2. Indicators of Students' Ecological Ethics

Ecological Ethical Aspects	Indicator	Findings
Awareness	Understanding the environment as a trust	Tall
Attitude	Care and responsibility	Positive
Behavior	Real actions to protect the environment	Consistent

Table 2. Indicators of Students' Ecological Ethics show that integrating Islamic Religious Education with Environmental Education at Hidayatullah Middle School, Batam, plays a significant role in shaping students' ecological ethics, including awareness, attitudes, and behaviors.

In terms of awareness, it shows that students have a strong understanding of the environment as a trust from Allah Swt. This understanding aligns with Seyyed Hossein Nasr's view that, in Islam, nature is seen as a manifestation of divine signs (*āyāt kauniyyah*) that must be protected with full spiritual responsibility. This ecological awareness, grounded in monotheism, reinforces the belief that environmental education rooted in faith values will be more meaningful than a purely technical ecological approach. Mangunjaya and McKay's research also found that an Islamic theological approach can significantly increase the ecological awareness of the Muslim community (Majeri Mangunjaya & Elizabeth McKay, 2012).

In terms of attitudes, students demonstrate a positive concern for and responsibility toward the environment. This attitude is reflected in their willingness to participate in cleaning activities and maintain the school environment as part of their moral obligation. According to Ahmad Tafsir, Islamic Religious Education essentially aims to develop noble morals that are manifested in concrete attitudes and behaviors (Pramudita, 2023). In this context, environmental awareness can be understood as part of Islamic morality. This finding is supported by research by Aziz Akbar Mukasyaf, which states that internalization of values in environmental education has a significant influence on the formation of students' environmental awareness attitudes (Mukasyaf, 2024).

Meanwhile, in terms of behavior, students consistently take concrete steps to protect the environment, such as properly disposing of trash, caring for plants, and maintaining classroom cleanliness. This consistent behavior indicates that the integration of Islamic Religious Education and Environmental Education has successfully encouraged sustainable behavioral change (Juliani, et.al, 2024). This aligns with Lickona's character education theory, which emphasizes that effective values education must encompass three main components: moral knowing, moral feeling, and moral action.⁵ Research by Sawaluddin also demonstrates that the integration of religious and environmental education can shape students' ecological behavior in a more stable and sustainable manner (Nurhasnawati, Sawaluddin, 2025).

To comprehensively understand how integrating Islamic Religious Education and Environmental Education develops students' ecological ethics, a conceptual framework is needed that systematically illustrates the relationships among these elements. This integration model is based on field findings, theoretical studies, and the relevance of Islamic teachings, which position humans as caliphs on earth with the responsibility to preserve the environment (Sawaluddin, Koij Syahbudin, Imran Rido, 2022).

Through this model, the integration of Islamic Religious Education and Environmental Education is not understood as a mere merging of subjects, but rather as a process of internalizing theological, moral, and ecological values that are implemented in learning, school culture, and students' daily behavior (Sawaluddin et al., 2018). Therefore, visualizing the integration model is necessary to clarify the flow of value transformation into students' ecological awareness, attitudes, and behavior in a sustainable manner.

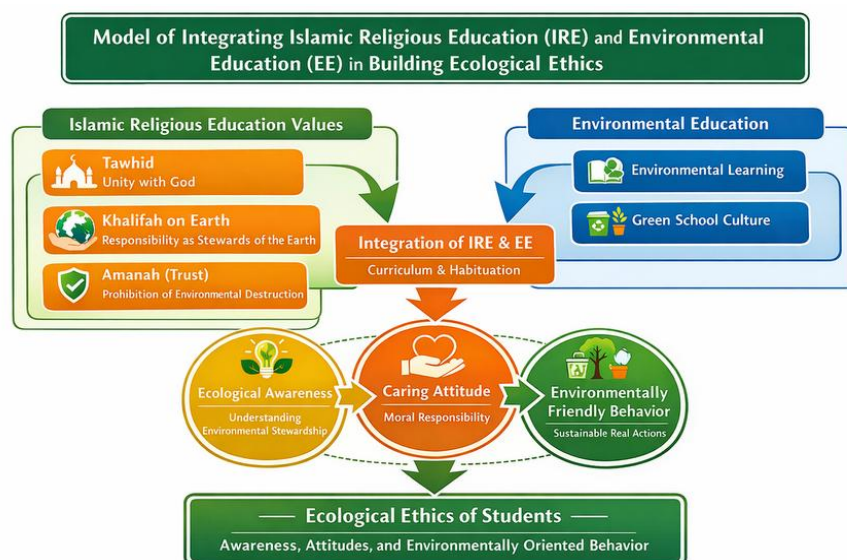


Figure 1. Model of Integration of Islamic Religious Education and Environmental Education in Building Ecological Ethics

Figure 1, shown above, illustrates the integration of Islamic Religious Education values, including the Model of Integration of Islamic Religious Education and Environmental Education. This model illustrates a conceptual framework for developing students' ecological ethics through an integrative approach that combines Islamic values with environmental education. This model shows that the formation of ecological ethics does not occur instantly, but rather through stages of internalization of values, strengthening attitudes, and continuous behavioral habits (Zarin et al., 2023).

On the left side of the image are shown the values of Islamic Religious Education: *tauhid*, *khalifah fil ardh*, and *amanah*. The value of *tauhid* emphasizes the unity of the relationship among humans, nature, and Allah Swt., so that environmental exploitation is seen as a deviation from the creed. Al-Qardhawi emphasized that *tauhid* requires humans to maintain the balance of Allah's creation and

prohibits all forms of destruction (*ifsād*) (Saputra, et.al, 2021). The concept of *khalifah fil ardh* places humans as caretakers of the earth, not as absolute rulers, as Mangunjaya emphasizes, and ecological responsibility is a theological mandate in Islam (Jamaluddin, 2018). The value of *amanah* emphasizes the prohibition on harming the environment as part of Muslims' moral and spiritual responsibility (Nasr, 2021).

The right side of the image shows the components of Environmental Education, including environmental learning and the development of a green school culture. Environmental learning provides cognitive ecological knowledge and skills, while a green school culture serves as a medium for habituation and role modeling. According to Tilbury, effective environmental education must combine cognitive, affective, and psychomotor dimensions through learning and institutional culture (Zarin et al., 2023). This is reinforced by research by Hasan et al, which shows that an environmentally conscious school culture significantly influences students' environmentally conscious behavior (Hasan et al., 2024).

These two elements are brought together through the integration of Islamic Religious Education and Environmental Education in the curriculum and its implementation. This integration signifies that Islamic values are not only taught normatively but also implemented contextually in learning activities and daily school life. This approach aligns with the concept of an integrated curriculum, which emphasizes the integration of values, knowledge, and practice in character education (Fahlawi & Pertiwi, 2024).

The results of this integration process are shown at the bottom of the image as three stages of ecological ethics: ecological awareness, caring attitudes, and environmentally friendly behavior. Ecological awareness reflects students' understanding of the environment as a trust from God. Caring attitudes reflect the internalization of moral responsibility for the environment, while environmentally friendly behavior demonstrates concrete, sustainable actions to preserve it. These stages align with Bloom's theory of behavior formation, which places the cognitive, affective, and psychomotor domains as a unified whole in education (Syukri, et.al, 2024).

Overall, this figure confirms that the synergy between Islamic theological values and structured environmental education shapes students' ecological ethics. This finding aligns with research by Fatoni, (2024), which concluded that integrating religious and environmental education can shape students' character to be both religious and ecologically aware (Rofi Wahanisa, 2021). Thus, this integration model underscores the urgency of developing an education grounded in Islamic values and environmental sustainability at the secondary school level.

Ecological Ethics of Students After Implementing the Integration of Islamic Religious Education and Environmental Education

The implementation of integrated Islamic Religious Education and Environmental Education at Hidayatullah Middle School in Batam has had a positive impact on students' ecological ethics, encompassing ecological awareness, attitudes, and behavior. This ecological ethics is formed through the internalization of Islamic values combined with ongoing environmental learning and habits.

Table 3. Ecological Ethics of Students After Implementing the Integration of Islamic Religious Education and Environmental Education

Ecological Ethical Aspects	Key Indicators	Research Findings
Ecological Awareness	Understanding the environment as a trust from Allah	Tall
Ecological Attitude	Moral concern and responsibility	Positive
Ecological Behavior	Real actions to protect the environment	Consistent

Table 3. Ecological Ethics of Students After Implementing the Integration of Islamic Religious Education and Environmental Education. The results show that integrating these two educational fields

significantly contributes to students' ecological ethics, encompassing ecological awareness, attitudes, and behavior. These findings indicate that Islamic values integrated with environmental education can shape students' ecological character holistically (Hermawansyah, 2025).

In terms of ecological awareness, the research findings indicate a high level, reflected in students' understanding of the environment as a trust from Allah Swt. This understanding demonstrates the successful internalization of the values of monotheism, *khalifah fil ardh*, and *amanah* in Islamic Religious Education learning integrated with Environmental Education (Rifda Haniefa, 2021). According to Al-Qardhawi, the environment is part of God's creation that must be protected as a form of human obedience and spiritual responsibility (Aprita & Afriza, 2023). Similarly, Mangunjaya and McKay emphasized that education based on Islamic ecotheology can increase ecological awareness because it is rooted in students' religious beliefs (Majeri Mangunjaya & Elizabeth McKay, 2012).

In terms of ecological attitudes, students demonstrate positive concern and moral responsibility for the environment. This attitude is reflected in their willingness to actively participate in school cleaning, reforestation, and environmental maintenance activities. Tilbury states that effective environmental education must foster sustainable attitudes and values as part of students' moral awareness (Tilbury, 2019). Research by Afif Alfiyanto et al. also demonstrates that integrating religious and environmental education significantly influences students' environmental awareness (Afif Alfiyanto et al.).

Meanwhile, regarding ecological behavior, research findings indicate that students have consistently taken concrete actions to protect the environment. These behaviors include properly disposing of trash, caring for plants, maintaining classroom cleanliness, and conserving water and electricity. This consistent behavior indicates that ecological values and attitudes have been internalized in students' psychomotor domains. Bloom emphasized that effective education must result in behavioral change as a result of the integration of the cognitive, affective, and psychomotor domains (Sahri, 2023). This finding aligns with research by Muhammad Hajirin Nur, et.al (2022), which shows that a green school culture and sustainable habits play a crucial role in shaping students' environmentally friendly behavior.

The gradual internalization of Islamic values and environmental awareness, starting with the development of ecological awareness, strengthening caring attitudes, and ultimately leading to environmentally friendly behavior (Rofiq, 2022). The integration of Islamic Religious Education and Environmental Education is positioned as a strategic approach to building students' character, enabling them not only to understand the environment as a trust from God but also to reflect it in sustainable attitudes and actions.

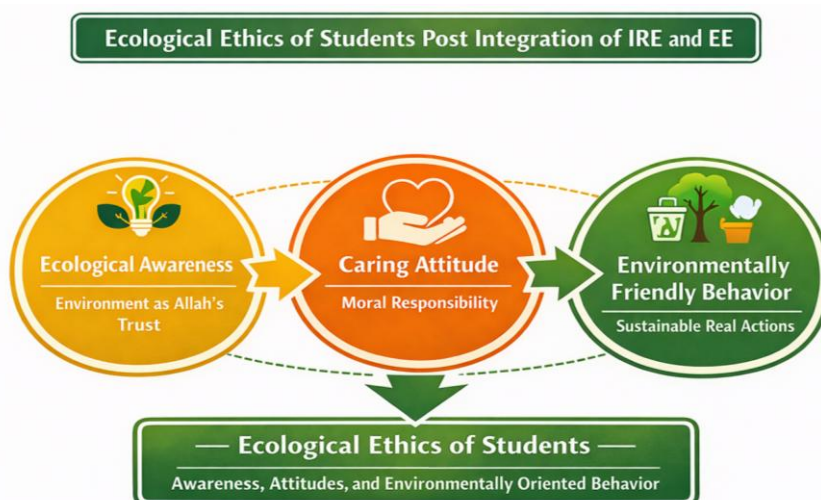


Figure 2. Ecological Ethics of Students After Integration of Islamic Religious Education and Environmental Education

Figure 2. Ecological Ethics of Students After the Integration of Islamic Religious Education and Environmental Education illustrates the gradual development of ecological ethics in students, from ecological awareness to caring attitudes and ultimately to sustainable, environmentally friendly behavior. This model emphasizes that ecological ethics does not emerge instantly, but rather through a systematic and continuous educational process (Amrullah, et.al, 2025).

In the first stage, ecological awareness, the environment is understood as a trust from God. This awareness forms the theological foundation that positions nature as God's creation to be protected and preserved. From an Islamic perspective, ecological awareness is rooted in the concepts of *tauhid* and *khalifah fil ardh*, which emphasize that humans have a moral and spiritual responsibility for the sustainability of nature (Nasr, 2021). Al-Qardhawi stated that protecting the environment is part of worship and a form of obedience to God, while environmental destruction is considered an *ifsād* act prohibited by Islamic law (Saputra, et.al, 2021). Mangunjaya and McKay's research also shows that an Islamic ecotheological approach can increase students' ecological awareness because its values are rooted in strong religious beliefs (Majeri Mangunjaya & Elizabeth McKay, 2012).

The second stage is caring, characterized by the emergence of a sense of moral responsibility for the environment. This caring attitude is the result of internalizing the religious values and ecological understanding instilled in the previous stage. Caring attitudes reflect the affective dimension of education, where students not only understand the importance of protecting the environment but also have the will and moral commitment to do so. According to Tilbury, effective environmental education must be able to shape sustainable values and attitudes as a basis for behavioral change (Amrullah, et.al, 2025). Research by Iwan et al., (2025) supports this finding by stating that the integration of religious and environmental education has a significant influence on the formation of students' environmental awareness (Issabila & Nahrowi, 2025).

The third stage is environmentally friendly behavior, demonstrated through concrete and sustainable actions to protect the environment. This behavior includes the habit of disposing of waste properly, caring for plants, maintaining classroom and school cleanliness, and conserving natural resources (Walidah & Husaini, 2023). Consistency in this behavior demonstrates that students have fully internalized ecological ethics. Bloom emphasized that the result of effective education is behavioral change as an integration of the cognitive, affective, and psychomotor domains. Research by Maisah et al., (2025) also demonstrated that green school habits and culture play a crucial role in shaping students' sustainable ecological behavior.

Overall, this figure confirms that students' ecological ethics result from an integrative educational process that combines the values of Islamic Religious Education and Environmental Education (Toguan Rambe, Seva Maya Sari, 2021). This finding aligns with previous studies that emphasize that education grounded in religious and environmental values can shape students' character, not only intellectually but also morally and ecologically responsible. Therefore, this ecological ethics model is relevant as a framework for developing Islamic education that is responsive to the challenges of the global environmental crisis

Challenges and Supporting Factors in the Implementation of the Integration of Islamic Religious Education and Environmental Education

The integration of Islamic Religious Education and Environmental Education in developing students' ecological ethics is a strategic endeavor that faces various supporting factors and challenges. Research shows that the readiness of human resources, school policies, institutional culture, and the participation of the entire school community greatly influence the success of this integration. Furthermore, limited teacher competency and supporting facilities remain obstacles that need to be addressed systematically.

Table 4. Challenges and Supporting Factors for the Implementation of Islamic Religious Education and Environmental Education Integration

Aspect	Supporting Factors	Challenge
Teacher	Commitment and understanding of ecological Islamic values	Not all teachers understand the concept of integration
Curriculum	Flexibility of the Independent Curriculum	Limitations of integrative guidance
Means	School cleanliness and environment program	Supporting facilities are not optimal
School Culture	Religious habits and environmental care	Consistency of student behavior
Institutional Support	Principal's policy	Monitoring is not yet continuous

Table 4: This table comprehensively describes the dynamics of the supporting factors and challenges in implementing the integration of Islamic Religious Education and Environmental Education. The data in this table shows that the success of integration is determined not only by pedagogical aspects, but also by interrelated structural, cultural, and managerial factors (Alfadhli, et.al, 2025).

For teachers, commitment to and understanding of ecological Islamic values are key supporting factors. Teachers who understand the concepts of monotheism, caliphate, and trustworthiness can contextualize Islamic teachings to environmental issues in the learning process (Hasan et al., 2024). According to Al-Qardhawi, environmental stewardship is a religious responsibility that must be consciously taught in Islamic education (Saputra, et.al, 2021). Mangunjaya and McKay's research shows that religious teachers' ecological competence and awareness significantly influence students' development of ecological ethics (Mangunjaya & .

However, a persistent challenge is the unequal understanding among teachers of the concept of integrating Islamic Religious Education and Environmental Education. Some teachers still view environmental education as a science subject, resulting in suboptimal integration of ecological values into PAI. This finding aligns with research by Fahlawi & Pertiwi, which states that limited ecological literacy among religious teachers is a major obstacle to the implementation of ecotheological education in schools (Fahlawi & Pertiwi, 2024).

From a curriculum perspective, the flexibility of the Independent Curriculum presents a strategic opportunity to integrate Islamic Religious Education and Environmental Education values (Fatoni, 2024). The adaptive curriculum allows teachers to develop thematic materials, implement environmentally based projects, and strengthen students' character profiles. UNESCO emphasizes that a flexible curriculum is a crucial prerequisite for education for sustainable development (Tilbury, 2019).

However, the limited availability of integrative guidance remains a challenge. The lack of modules or technical guidelines that specifically link Islamic Religious Education material to environmental issues leaves implementation dependent on individual teacher initiative. This situation was also identified in Rofi Wahanisa, (2021) research, which emphasized the importance of operational guidance in values-based environmental education.

In terms of facilities, school cleanliness and environmental programs such as community service activities, reforestation, and waste management are supporting factors in fostering environmentally friendly behavior (Hermawansyah, 2025). These facilities serve as contextual learning tools that reinforce the internalization of ecological values. Palmer states that direct experience within the school environment plays a crucial role in shaping students' ecological behavior (Siregar, Ibrahim, 2024).

However, challenges arise in the form of suboptimal supporting facilities, such as limited waste management facilities or educational green spaces. These limitations can reduce the effectiveness of

practice-based learning. Sterling emphasized that sustainability education requires adequate support facilities to translate ecological values into concrete actions (Kim, 2021).

Religious habits and environmental care culture are key forces in developing students' ecological ethics. A consistent school culture can shape positive habits through role models and daily routines. Research by Mansur Hidayat shows that institutional culture is a key factor in developing sustainable environmental behavior (Mansur Hidayat, 2023).

However, the challenge faced is the consistency of student behavior, especially outside the school environment. This indicates a gap between the values people understand and their actual behavior (the value–action gap). Kollmuss and Agyeman explain that changing environmental behavior requires time and sustained habituation supported by the social environment (Subekhi & Nursikin, 2025).

In terms of institutional support, the principal's policies supporting the integration of Islamic Religious Education and Environmental Education are a strengthening factor in implementation. Visionary leadership can direct school programs toward strengthening ecological character. Fullan emphasized the strategic role of school leadership in the success of educational innovation (Zulfikar, 2025). The challenge is the lack of ongoing monitoring, leading to a lack of systematic evaluation of integration implementation. Research by Bush (2021) emphasizes the importance of ongoing monitoring and evaluation to ensure the sustainability of values-based education programs (Karman et al., 2023).

Supporting factors and challenges in implementing the integration of Islamic Religious Education and Environmental Education in the school environment. This model illustrates that the interactions among the pedagogical, curricular, institutional, and cultural aspects of the school influence the successful integration of Islamic Religious Education and Environmental Education (Yudi, 2025). Supporting factors reinforce the internalization of Islamic values and environmental awareness, while challenges require strategic management to overcome obstacles to achieving the goal of developing students' ecological ethics.

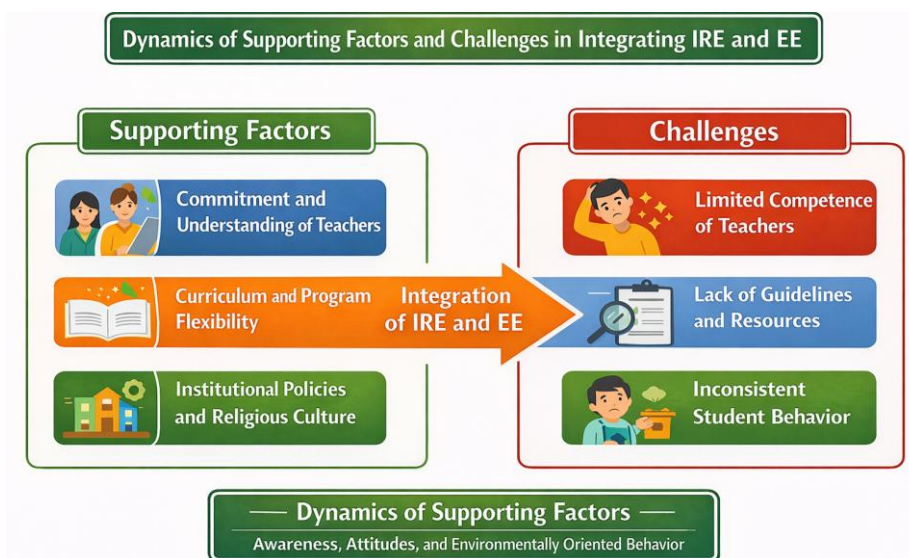


Figure 3. Dynamics of Supporting Factors and Challenges of Islamic Religious Education and Environmental Education Integration

Figure 3 illustrates the dynamics of integrating Islamic Religious Education and Environmental Education, which are influenced by two main factors: supporting factors and challenges. This integration is positioned as a dynamic, non-linear process and is highly dependent on the readiness of human resources, school policies, and a developing learning culture.

Supporting Factors for the Integration of Islamic Religious Education and Environmental Education

The left side of the figure displays several key supporting factors. First, teacher commitment and understanding are crucial foundations for successful integration. Islamic Religious Education teachers who possess ecological awareness and a theological understanding of *tauhid*, *khalifah*, and *amanah* can contextualize religious teachings with environmental issues. This aligns with Tilbury's view, which asserts that the success of environmental education is largely determined by the competence and commitment of educators in internalizing sustainability values into learning (Arif Atma Mahendra, Defriyadi, Ali Murtaho, Baharudin, 2021).

Second, the flexibility of the curriculum and environmental programs allows for the integration of ecological values into lesson plans, learning projects, and extracurricular activities. An adaptive curriculum supports a thematic, integrative approach, as recommended by UNESCO in its Education for Sustainable Development (ESD) framework (Muizudin, 2025). Mangunjaya and McKay's research also shows that integrating Islamic values and environmental education is more effective when supported by a curriculum that is not rigid (Majeri Mangunjaya & Elizabeth McKay, 2012). Third, school policies and religious culture act as structural and cultural reinforcements. A school culture that emphasizes cleanliness, caring, and collective worship accelerates students' internalization of ecological ethics. This aligns with Ardoin et al.'s research, which finds that institutional culture is a key factor in shaping sustainable environmental behavior in schools.⁴

Challenges of Integrating Islamic Religious Education and Environmental Education

The right side of the image shows the various challenges faced. The main challenge is limited teacher competency, particularly in linking religious material to environmental issues in a pedagogically and practically meaningful way. Some teachers still view Environmental Education as solely the domain of science subjects, resulting in suboptimal integration into Islamic Religious Education (Albar et al., 2024). This condition was also found in Majeri Mangunjaya, research, which stated that low ecological literacy among religious teachers is a barrier to ecotheological education (Majeri Mangunjaya & Elizabeth McKay, 2012).

The next challenge is the limited availability of guidance and supporting resources. The lack of integrative modules, learning media, and school facilities (such as educational parks or waste banks) limits the strengthening of practical practices. According to Sterling, sustainability education requires systemic support through consistent policies, facilities, and learning resources (Karman et al., 2023).

Furthermore, maintaining consistent student behavior is also a challenge. Although ecological awareness and attitudes have been established, environmentally friendly behavior is not always consistent, especially outside the school environment. This confirms Kollmuss and Agyeman's findings that there is a value-action gap between environmental knowledge and individual action (Rohmatulloh et al., 2022).

4. CONCLUSION

Based on the results of research on the Integration of Islamic Religious Education with Environmental Education in Building Students' Ecological Ethics, it can be concluded that the integration of Islamic Religious Education and Environmental Education has been implemented through the strengthening of ecologically oriented Islamic values, especially the concepts of *tauhid*, *khalifah*, and *amanah*, which are internalized in the curriculum, learning, and school culture. This integration shows that religious education has a strategic role in building theological and moral ecological awareness. Students' ecological ethics after the integration of Islamic Religious Education and Environmental Education are in the positive category, reflected in increased ecological awareness, caring attitudes towards the environment, and relatively consistent environmentally friendly behavior.

The challenges and supporting factors for integrating Islamic Religious Education and Environmental Education are dynamic. The main supporting factors include teacher commitment, curriculum flexibility, religious school culture, and school policy support. Meanwhile, challenges faced include limited competence of some teachers in an integrative approach, minimal technical guidance, limited supporting facilities, and inconsistent student behavior. The novelty of this research lies in developing an integrated model of Islamic Religious Education and Environmental Education that positions ecological ethics as the primary goal of education rather than merely a byproduct of environmental learning. The implications of this research are theoretical, practical, and policy. Theoretically, this research enriches the study of Islamic Religious Education through an Islamic ecotheological perspective and strengthens the theory of character education grounded in ecological values. In practice, the findings of this research can serve as a reference for teachers and school administrators in designing Islamic Religious Education that integrates environmental issues through the development of lesson plans, environment-based learning projects, and the strengthening of a green school culture with religious nuances. Policy-wise, this research provides a basis for educational policymakers to consider developing more systematic, integrative guidelines for Islamic Religious Education and Environmental Education as part of a strategy to strengthen character education and sustainable education in schools.

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