

Spiritual-Ecology Learning: Strategies for Shaping an Environmentally Friendly Generation Based on Islamic Values

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Abstract: *Ecological problems in schools and madrasas remain evident in water waste, excessive plastic use, and weak internalisation of Islamic values in environmental conservation practices. This condition underscores the need for an educational model that not only focuses on knowledge but also shapes ecological awareness grounded in spirituality. This study aims to analyse how Islamic values, especially amanah (trust), khalifah (stewardship), and tauhid (monotheism), can shape students' ecological awareness and foster a 'Green Muslim' character through an experience-based ecological literacy model. The study uses a qualitative case study approach at MTsN 4 Tulungagung, employing observation, interviews, and documentation to explore learning practices and school culture. The results of the study show that activities such as Eco-Islamic Day, Green Friday, Eco-Worship, and classroom garden projects can build consistent ecological behaviour, discipline, social awareness, and religious understanding of the environment. The integration of Islamic values in practical terms has proven to create a strong and sustainable Islamic ecological identity.*

Keywords: *Islamic Values, Ecological Literacy, Green Muslim, Character Building*

Introduction

The global ecological crisis, marked by climate change, pollution, and biodiversity loss, is also reflected in schools and madrasas; wasteful water consumption, littering, and excessive use of single-use plastics are still common. This condition shows that cognitive instruction in environmental knowledge is not sufficient to change students' attitudes and behavior. In many Islamic educational institutions, religious education is still focused on ritual-fiqh aspects and does not emphasize eco-theological dimensions such as tauhid, khalifah, and amanah ([Muzakki dkk., 2025](#)). In fact, Islamic values that regard nature as a sign of God have great potential to serve as the foundation for ecological awareness and environmental care among students, especially when integrated into a systematic, contextual,

sustainable, and action-oriented model of ecological literacy in the environments around schools and homes.

Many studies show that integrating Islamic values into education positively affects environmental awareness. Tawhid learning grounded in verses of nature can strengthen students' ecological literacy in Islamic elementary schools ([Rahman dkk., 2025](#)). Environmental-aware islamic education's teaching materials in junior high schools show a significant and consistent increase in students' knowledge and environmentally friendly attitudes in various attitude indicators ([Abd Rahman dkk., 2020](#)). At the school culture level, the Adiwiyata madrasah culture, which emphasizes the role of humans as caliphs, influences energy-saving habits and sustainable waste management. International studies on Green Islam also emphasize the role of Islamic teachings in shaping ecological ethics and environmental activism across contemporary Muslim communities worldwide and across diverse generations ([Kurbianto dkk., 2024](#)).

However, most previous studies remain descriptive and focus on ecological knowledge and attitudes, with few examining in depth how Islamic values function as a framework of meaning that shapes students' ecological awareness within a comprehensive model of ecological literacy ([Ayu Setianingrum dkk., 2024](#); [Pratisti, 2024](#)). In addition, the concept of 'Green Muslim' appears more often in studies of social movements and communities, and has not been widely operationalized as an educational character in schools and madrasahs. This gap highlights the need for studies that combine eco-theological analysis, learning design, and real-world environmental experiences to comprehensively understand the process of forming Islamic-based ecological character in the context of formal education, particularly in Indonesian Islamic educational institutions at the elementary and secondary levels, which have diverse sociocultural, geographical, and ecological characteristics.

Based on this context, this study aims to 1) examine how Islamic values shape students' ecological awareness through the implementation of an ecological literacy model in schools or madrasahs, and 2) examine how an Islamic-based ecological literacy model can foster a 'Green Muslim' character through real, structured, and sustainable learning experiences and environmental practices, both inside and outside the classroom at various levels of primary and secondary education. The research is directed at mapping the process of internalizing the values of tauhid, khalifah, amanah, and rahmatan lil-'alamin in learning activities, school culture, and environmental action projects involving students. In addition, this study seeks to formulate the characteristics of an applicable Islamic-based ecological literacy model as a reference for the development of ecologically minded Islamic education across various educational contexts in Indonesia.

The results of the study show that the Islamic-based ecological literacy model shapes students' ecological awareness through three main processes: strengthening the meaning of ecological verses in the Qur'an and Hadith, habituating a religious green school culture, and direct involvement in environmental preservation actions at the school and home. The values of tauhid, khalifah, and amanah are internalized when students interpret caring for nature as worship and a concrete form of gratitude in their daily lives. The character of a 'Green Muslim' is evident in increased water and energy conservation, reduced plastic waste, recycling initiatives, and the courage

to voice environmental issues within the school community and the surrounding society. These findings reinforce the results of previous studies on the effectiveness of Islamic-based environmental education, but also provide a comprehensive, contextually grounded, practical model for educators.

Method

This study uses a qualitative case study design to gain an in-depth understanding of the internalization of Islamic values and ecological literacy practices that naturally occur in the school context. This approach aligns with recommendations from Islamic education and eco-pedagogy research, which emphasize the importance of exploring meaning, experience, and social processes in shaping students' ecological behavior. Qualitative research was chosen to capture the dynamics of values, interactions, and daily practices that holistically shape the character of a 'Green Muslim' ([Creswell & Poth, 2018](#)). Case studies allow researchers to describe phenomena contextually, especially when religious values are integrated into diverse ecological practices. This design aligns with observation- and interview-based research practices demonstrated in previous research documents.

The research was conducted at MTsN 4 Tulungagung, a madrasah that actively develops ecology literacy programs based on Islamic values. The location was selected purposively because this madrasah has a prominent religious-ecological school culture, including the Green Friday program, Eco-Islamic Day, and class waqf garden projects, as documented. The madrasah environment, rich in religious practices and environmental activities, enabled researchers to explore the relationships among Islamic education's learning, school culture, and students' real ecological experiences. The research was conducted from August to October, a sufficient period to observe routine activities, monthly programs, and changes in students' ecological behavior over a continuous period.

The research data consisted of primary and secondary data. Primary data were obtained through observation of learning activities, in-depth interviews with Islamic education's teachers, classroom teachers, the madrasah principal, students, extracurricular advisors, and school cleaning staff, and through documentation of environmental activities at MTsN 4 Tulungagung. This data included direct practices such as Green Action Day, Eco-Worship, and waste management programs linked to Islamic values. Secondary data sources included curriculum documents, teachers' daily records, madrasah activity reports, Islamic ecology posters, and photographs of documented activities ([Remanita dkk., 2025](#); [Yin, 2018](#)). Secondary data also includes previous research results and theories from reputable journals on Islamic ecopedagogy and ecological literacy, which serve as references for analysis and meaning triangulation.

Data collection techniques include participatory observation, in-depth interviews, and documentation studies, as commonly used in qualitative educational research. Observations were conducted to understand student behavior in daily activities and environmental programs, including how Islamic values are internalized through direct practice. Semi-structured interviews were conducted with Islamic education's teachers, homeroom teachers, madrasah principals, extracurricular advisors, cleaning staff, and students actively involved in environmental activities.

Documentation was analyzed to capture visual evidence, activity records, teaching materials, and Islamic ecological slogans that reinforce school culture. The combination of these three techniques ensured that the data collected was rich, contextual, and reflective of actual practices in madrasahs ([Miles & Huberman, 2014](#)).

Data validity was maintained through source triangulation, technique triangulation, and member checking, in accordance with qualitative research standards widely used in international education journals. Source triangulation was carried out by comparing information from teachers, students, madrasah principals, and school documents. Technique triangulation was carried out by confirming observation findings through interviews and documentation. Member checking is done by asking informants to review the summary of the interview results to ensure the accuracy of the meaning. In addition, the researcher maintains an audit trail through systematic recording of the research process, ensuring transparency in the analysis. This approach ensures that the findings reflect the authentic phenomenon related to the formation of Islamic ecological character at MTsN 4 Tulungagung.

Result and Discussion

Result

1. Islamic Values Shape Ecological Awareness

Islamic values such as amanah (trust), khalifah fil ard (stewardship of the earth), and the prohibition of fasad (corruption) are important foundations in building students' awareness of their responsibility to protect the environment. Through observation, it was evident that teachers not only taught environmental concepts theoretically, but also integrated verses from the Qur'an and hadiths about ecological ethics into the daily learning process. The head of the madrasah explained,

"Ecological learning in our madrasah is always linked to Islamic values. Children are encouraged to understand that protecting the environment is part of their mandate as khalifah on earth. So it's not just environmental theory, but also spiritual meaning."

This statement shows that ecological awareness is formed through an integrative approach that combines scientific knowledge and an understanding of religious values. The Islamic Education's teacher also emphasized that this approach helps students see the close relationship between religious practice and environmentally friendly behavior. He explained,

"When teaching about cleanliness or waste management, I always relate it to the hadith about cleanliness as part of faith. The children find it easier to accept because they feel it is part of worship."

The reinforcement of Islamic-based ecological values is also supported by direct practice in school activities, such as the monthly Eco-Islamic Day. This activity invites students to take concrete actions, such as sorting waste, caring for

plants, and cleaning the school mosque courtyard, while reciting certain prayers. The class teacher added,

“During environmental activities, we always invite the children to recite the basmalah, then explain that caring for plants and cleaning the environment is part of worship. That way, they have an emotional and spiritual connection to the activity.”

The researcher’s observations indicate that Islamic values play a significant role in shaping students’ ecological awareness. In addition, classroom observations show that teachers strive to instill ecological awareness through habitual practices rooted in Islamic teachings. At the beginning of each lesson, teachers direct students to clean the classroom and madrasah grounds while reciting short prayers. This habit is not just a routine but is oriented towards building an ecological character with a spiritual dimension. Islamic Education’s teachers said,

“We accustom children to always start with the intention of protecting the environment for Allah. For example, when throwing trash in its place, I remind them that this small action is a form of worship. Over time, the children began to understand that maintaining cleanliness is not just a school rule but part of their faith.”

This statement is reinforced by students’ increased consistency in maintaining classroom cleanliness after the teacher linked the activity to the concept of righteous deeds. The number of cleanliness violations has decreased in the last three months after the implementation of an Islamic values-based ecological literacy approach. One seventh-grade student said,

“I used to think that taking care of plants or cleaning was just a chore. But after the teacher explained that we are khalifah on earth, I feel that littering is a sin.”

These findings show that integrating Islamic values into ecological literacy not only influences students’ knowledge but also shapes their moral and religious perceptions of ecological activities. This finding is reinforced by observations of Green Friday activities, a weekly program that involves reciting prayers together before cleaning up the environment. In addition to students’ perspectives, interviews with homeroom teachers revealed that students’ ecological awareness has strengthened due to the school’s cultural support that aligns with Islamic values. The homeroom teacher said,

“We always connect every cleaning activity with Islamic teachings. In fact, the cleanliness slogan at our school uses verses and hadiths. This makes it easier for children to accept because they feel close to the values being taught.”

The research findings show that integrating Islamic values into the ecological literacy model not only builds conceptual understanding but also creates a learning experience that engages spiritual, moral, and daily habits. This approach

has proven effective in shaping students' ecological awareness and fostering a 'Green Muslim' character that is not merely environmentally friendly but also grounded in faith in preserving the earth.

2. Islamic-Based Ecological Literacy Model

In applying the Islamic-based ecological literacy model, learning experiences and real-life environmental practices are important aspects in shaping the character of "Green Muslims" in students. Observations show that students are invited to participate in various environmental activities, such as gardening, sorting waste, and maintaining classroom cleanliness, while receiving spiritual understanding of each activity. The head of the madrasah explained,

"The environmental learning we do is always linked to Islamic values. We emphasize to students that every activity, such as caring for plants or cleaning the yard, is part of the mandate entrusted to us by Allah. That way, they can feel that environmental practices are a form of worship, not just a school assignment."

The principal's statement shows that environmental activities grounded in Islamic values can create meaningful learning experiences and foster students' spiritual ecological awareness. This is supported by interviews with Islamic Education teachers who emphasize the importance of hands-on practice in shaping ecological character. An Islamic Education teacher explained,

"We deliberately design learning activities that get children directly involved, not just listening. For example, when practicing sorting waste, I relate it to the concept of cleanliness as part of faith. Children become more sensitive and begin to get used to doing the right thing because they feel it is a religious command."

The direct involvement of students in ecological practices, coupled with the instilling of Islamic values, has been proven to shape positive habits. The Green Action Day activity showed that most students were able to adopt environmentally friendly behaviors independently, without constant reminders from teachers. This was also conveyed in the teacher evaluation, which showed an increase in student consistency in caring for the madrasah's green areas and reducing plastic waste. One student said,

"In the past, I participated in cleaning because I was told to, but now I feel that protecting the environment is part of worship. The teacher said that we are caliphs, so if I litter, it feels like I am violating my mandate."

These findings show how direct learning experiences developed through the Islamic ecological literacy model can foster a deep awareness of ecological responsibility as part of their religious identity. In addition, Islamic ecology-themed posters, such as "Caring for the earth is part of faith" or "Planting trees is charity," help reinforce the internalization of these values in students' daily lives. The homeroom teacher also emphasized this in an interview,

“Our school environment is designed to remind children of the importance of caring for the earth as worship. Posters, routine activities, and even the teachers’ approach are all directed at consistently shaping the character of Green Muslims.”

Practical learning experiences grounded in real-world environments not only provide ecological understanding but also foster discipline, responsibility, and social sensitivity in students. For example, during Green Friday activities, students are assigned specific responsibilities, such as caring for certain plants, cleaning the worship area, and ensuring efficient water use for wudu. The class teacher explained,

“We give our children specific responsibilities, for example, one group takes care of certain plants. After we relate this to the concepts of sadaqah jariyah and amanah, they become more disciplined and feel proud to do it.”

This shows that when environmental practices are imbued with religious meaning, students become more emotionally and spiritually attached, leading to a stronger ecological character. Interviews with the Environmental Life extracurricular advisor also revealed that this approach encourages students to form a new identity as guardians of the earth, grounded in Islamic values. The extracurricular advisor explained,

“In every environmental activity, we always include relevant verses or hadiths. When they plant trees, we explain that the Prophet also encouraged this. Eventually, they feel that they are part of the struggle to protect the earth as exemplified by the Prophet.”

This finding shows that students not only understand ecological concepts but also identify with the Islamic ecological movement. Eco-Worship activities, such as taking only enough water for wudu, bringing their own drinking cups to reduce plastic waste, and cleaning the mosque after congregational prayers, demonstrate a shift toward sustainable behavior. This is in line with interviews with madrasah cleaning staff,

“Previously, children often wasted water. But after the teacher explained that using water sparingly is the Sunnah of the Prophet, they became more aware. I see for myself that now they are more economical and caring.”

In addition, observations of collaborative environmental projects show that the Islamic ecological literacy model also fosters students’ cooperation and leadership skills. In the class waqf garden project, each class was asked to design a small garden as a form of sadaqah jariyah (charity). Observations noted that students worked together to divide tasks, from digging the soil to planting to caring for the plants. Islamic Education’s teacher said,

“When we linked this garden project to class waqf, they looked very enthusiastic. They felt that they were doing something that was worship and

that the rewards would continue to flow. The characteristics of cooperation and leadership grew naturally because they had the same noble goal.”

These findings show that direct learning experiences grounded in Islamic values not only foster ecological behavior but also shape spiritual responsibility, social awareness, and Islamic ecological identity. Thus, the Islamic-based ecological literacy model has proven effective in fostering the character of “Green Muslims” who not only understand the environment but also make preserving the earth part of their worship and Islamic identity.

Discussion

Islamic Values Shape Ecological Awareness

The integration of Islamic values such as amanah (trustworthiness), khalifah (stewardship), and the prohibition of fasād (corruption) has been shown to significantly shape students’ ecological awareness, serving not only as a normative foundation but also as an ethical framework that instills moral responsibility for environmental sustainability. This finding aligns with studies showing that strengthening religious values in environmental learning can improve students’ moral perceptions of ecological issues and the impact of human behavior on the balance of nature ([Syukri dkk., 2024](#)). In line with this, international studies on Islamic Environmental Ethics emphasize that the concepts of tauhid and khalifah play an important role in shaping students’ views of nature, which is understood not merely as a resource to be exploited, but as a trust from Allah that must be preserved and utilized responsibly ([Khotimah dkk., 2024](#)). The practice of integrating verses from the Qur’an and hadith into ecological learning also provides a spiritual dimension that strengthens students’ internal motivation to behave in an environmentally friendly manner, positioning concern for the environment not only as a social obligation but also as part of worship and a manifestation of faith.

Habituation methods associated with worship values have been shown to increase the consistency of students’ ecological behavior more profoundly and sustainably, as this behavior is driven not only by external rules but also by internal spiritual awareness. This approach aligns with studies that emphasize that habit formation grounded in Islamic values is more effective in shaping character than purely cognitive lecture methods, because religious values engage students’ affective and moral dimensions ([Agung & Siregar, 2025](#); [Ali & Agushi, 2024](#)). In a broader context, religion-based ecological character education also shows that environmental spirituality plays an important role in strengthening students’ long-term commitment to green behavior and ecological responsibility. Simple routines, such as reciting the basmalah when caring for plants, maintaining cleanliness as part of faith, or interpreting environmental awareness as worship, have been proven to foster an ecological identity that is not only rational but also emotional and morally charged. Thus, the spiritualization of environmental behavior makes ecological awareness more stable, meaningful, and internalized in students’ personalities as part of their daily religious practices.

Activities such as Eco-Islamic Day and Green Friday show that direct learning experiences play an important role in strengthening ecological understanding while

building students' religious-ecological identity as a whole. This learning approach, which emphasizes active involvement, is relevant to various studies in Indonesia that emphasize that project-based environmental learning can increase students' sense of ecological responsibility, social awareness, and collective consciousness ([Lutfauziah dkk., 2022](#); [Shahida, 2023](#)). In addition, international studies on Islamic schools emphasize that action-based learning is more effective in shaping Green Ethical Identity among Muslim students, as students not only learn about the environment but also practice religious values in tangible ways ([Sadali, 2023](#)). Activities such as caring for plants, sorting waste, and cleaning mosques allow students to experience a direct connection between Islamic teachings and ecological behavior, thereby internalizing the values of worship and environmental awareness through concrete experiences.

A school culture that consistently uses verses, hadiths, religious-ecological slogans, and Islamic symbols has been proven to play a strong role in developing students' ecological awareness. These findings align with national research indicating that a religiously oriented green school culture creates a learning environment conducive to the formation of environmentally conscious character ([Ahmad dkk., 2025](#)). International studies show that spiritually based schools are more effective at fostering ecological behavior than schools that rely solely on a scientific approach ([Farmer & Farmer, 2023](#)). The physical environment of madrasahs, filled with religious messages about preserving the earth, serves as a visual reminder that reinforces the internalization of values, thereby creating an educational ecosystem that supports sustainable ecological practices.

Strengthening Islamic values not only increases students' ecological knowledge but also shapes their moral and religious perceptions of environmental actions. These findings reinforce research indicating that religious morality can serve as a mediator between environmental knowledge and ecological action ([Begum dkk., 2021](#)). Internationally, research on religious eco-pedagogy indicates that spiritually based environmental ethics trigger a more profound behavioral transformation than cognitive approaches ([Masbur, 2022](#); [Toomey, 2023](#)). Students feel that small actions, such as disposing of waste properly or conserving water, are part of worship. It is this combination of moral, spiritual, and practical aspects that makes their ecological behavior more consistent and long-lasting.

The Islamic-based ecological literacy model has proven effective in fostering Green Muslim character by integrating Islamic values, fostering environmentally friendly behavior, providing direct experience, and providing consistent school cultural support. This approach places concern for the environment as an integral part of character and faith formation, so that ecological practices do not stop at the level of knowledge, but develop into attitudes and concrete actions in students' daily lives. By reinforcing values such as amanah (trustworthiness), khalifah (stewardship), and moral responsibility towards nature, madrasahs demonstrate their strategic potential as spaces for the formation of an ecological identity deeply rooted in Islamic teachings. Thus, students are not only equipped with an understanding of the importance of environmental conservation but also nurtured with a spiritual commitment that encourages them to consciously, sustainably, and collectively care for and preserve nature.

Islamic-Based Ecological Literacy Model

Direct learning experiences form the foundation for shaping students' ecological character. National studies confirm that field activities linked to religious values effectively increase madrasah students' environmental awareness (Gitmiwati & Indrayuda, 2024). This aligns with international findings that experiential environmental learning strengthens ecological awareness by engaging emotional, social, and spiritual aspects ([Warners dkk., 2025](#)). In the context of MTsN 4 Tulungagung, practices such as caring for gardens and sorting waste, associated with the concept of amanah, demonstrate that combining direct experience with Islamic values can foster a stronger moral bond among students.

The integration of Islamic values has been shown to reinforce the meaning of ecological practices in the learning process, emphasizing not only cognitive and technical aspects but also the spiritual and moral dimensions of students. Recent studies show that learning from verses of the Quran can significantly increase ecological awareness, especially when natural phenomena are understood as signs of God's greatness that demand reflective attitudes and ethical responsibility ([Ahmad dkk., 2025](#); [Mukaromah dkk., 2025](#)). These findings align with the view that religious spirituality plays an important role in strengthening individuals' internal motivation to protect and preserve the environment ([Suarlin, 2023](#)). In the context of the research findings, teachers emphasized that every activity related to the environment is considered part of worship, so actions to maintain cleanliness, care for nature, and avoid environmental damage are interpreted as a form of obedience to Allah. This interpretation shows that when ecological practices are positioned as divine values, students find it easier to build emotional and spiritual connections with nature, which ultimately encourages conscious, consistent, and voluntary environmentally friendly behavior.

The consistency of students' ecological behavior, such as reducing plastic waste and maintaining the sustainability of green spaces in the madrasah environment, indicates that educational institutions that integrate Islamic values into environmental education can foster stable, sustainable ecological habits ([Lutfi dkk., 2025](#)). The study's findings show that students began to consciously adopt various environmentally friendly practices without the need for intensive supervision from teachers or the school. When these habits are linked to religious moral concepts, such as understanding sin, responsibility, and stewardship as caliphs on earth, students have a strong ethical drive to do the right thing in protecting the environment. This shows that the spiritual dimension not only complements but also plays a significant role in strengthening the process of ecological habituation, so that environmentally friendly behavior becomes part of students' character and moral awareness, rather than merely compliance with institutional rules.

The emergence of an Islamic ecological identity among students aligns with international research on eco-religious identity, which shows that religious symbols can strengthen ecological awareness. Recent research also finds that Islamic-themed posters in schools can indirectly and powerfully instill environmentally friendly values ([Gitmiwati & Indrayuda, 2024](#)). Research findings show that posters such as "Caring for the earth is part of faith" create a religious-ecological atmosphere that influences students' perceptions. When students feel that caring for the earth is part

of their faith, a new identity as “guardians of the earth” emerges, in line with Islamic teachings.

The formation of ecological discipline through the Green Friday program aligns closely with the concept of action competence, which holds that assigning concrete, sustainable responsibilities can shape mature, responsible ecological actions. Recent studies also show that instilling responsibility grounded in religious values significantly increases students' discipline in protecting and caring for the environment ([Bahtiar dkk., 2025](#); [Siagian dkk., 2023](#)). In line with these findings, this study shows that students tend to be more disciplined and consistent when ecological tasks are linked to the concepts of sadaqah jariyah (charity) and amanah (trust), thereby understanding environmental protection activities as acts of worship with long-term impacts. The combination of direct experience through practical application and deep spiritual meaning means that ecological responsibility is no longer merely formal or an institutional obligation, but has become a personal commitment rooted in moral awareness and religious values.

The integration of worship with ecological literacy, as embodied in the Eco-Worship program, demonstrates that religious rituals have great potential to shape pro-environmental behavior when placed in the right ecological context. This program emphasizes that worship practices, such as the efficient use of water during wudu (ablution) and the maintenance of cleanliness in places of worship, can serve as effective educational tools for raising students' ecological awareness. The research findings show a significant change in behavior, particularly in water conservation habits, after students understand that using water sparingly is part of the Sunnah of the Prophet and reflects moderation in Islam. This religious interpretation makes ecological practices not merely technical rules, but a form of exemplary behavior and obedience in worship ([Amrullah dkk., 2025](#)). This reinforces the idea that ecological literacy will be more effective and sustainable when directly integrated into daily worship practices, as spiritual values can deepen awareness, strengthen internal motivation, and consistently shape environmentally friendly habits.

The success of the class waqf garden project reflects the principle of participatory environmental education, where students' active involvement and collaboration in ecological activities can strengthen emotional bonds and a sense of ownership towards the environment. Interpreting environmental activities as a form of waqf provides a deep spiritual dimension, so that the project is not seen merely as a learning task but as a sustainable charity considered worship. By understanding this activity as an ongoing charity, students are encouraged to be more enthusiastic, responsible, and consistent in caring for and developing the classroom garden. This approach also fosters a natural sense of ecological leadership, as students feel a moral and spiritual responsibility for the sustainability of the environment they manage.

Conclusion

This study shows that Islamic values-based ecological literacy plays a significant role in shaping students' ecological awareness and sustainable behavior. The integration of the values of amanah (trustworthiness), khalifah (stewardship), tauhid (monotheism), and the prohibition of fasad (corruption) successfully provides

a spiritual foundation that strengthens students' internal motivation to protect the environment. Direct learning experiences through activities such as caring for plants, sorting waste, maintaining classroom cleanliness, and implementing Eco-Islamic Day create a deep emotional-spiritual connection between students and the environment. Daily habits associated with worship make ecological actions not just a routine, but part of their religious identity. Thus, environmental education grounded in Islamic teachings has proven effective in fostering a more stable and meaningful ecological awareness.

The Islamic-based ecological literacy model at MTsN 4 Tulungagung has proven capable of fostering a 'Green Muslim' character through a combination of hands-on learning experiences, real-world environmental practices, and a religious-ecological school culture. Activities such as Eco-Worship, Green Friday, and class waqf garden projects not only enhance students' ecological awareness but also foster discipline, social responsibility, leadership, and a strong Islamic ecological identity. When environmental practices are understood as worship and sadaqah jariyah, students show a long-term commitment to environmentally friendly behavior. These findings confirm that an eco-pedagogical approach combining spirituality and concrete practices can serve as a strategic model for madrasahs and schools in building an environmentally conscious generation grounded in faith values.

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