

## Integrating Akidah Akhlak Values through the ALAMKU 3R Program in Madrasah Ibtidaiyah

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### Abstract

Environmental education in primary schools is often implemented through technical activities without being systematically integrated into students' moral and theological development. In Islamic primary education, Akidah Akhlak instruction also tends to focus on doctrinal understanding rather than contextual ecological behavior, resulting in a gap between religious values and students' environmental responsibility. This study aims to examine the integration of values into ecological education through the ALAMKU (Reduce, Reuse, Recycle) program at MI Ma'arif Pagerwojo. This research employed a qualitative case study approach conducted over three months. Data were collected through semi-structured interviews, observations, and document analysis involving the headmaster, teachers, and 24 students. Data were analyzed using an interactive qualitative analysis model through data condensation, data display, and conclusion drawing. The findings reveal that the integration operated through curriculum-based theological alignment, structured 3R ecological practices, and cultural reinforcement through school habituation. The theological principles of tawhid, amanah, and khalifah functioned as moral drivers of students' ecological behavior. The program also contributed to an approximately 80% reduction in weekly plastic waste and improved students' environmental responsibility and discipline. In conclusion, the integration of Akidah Akhlak values through the ALAMKU 3R program demonstrates that faith-based ecological education can effectively strengthen students' ecological character and generate measurable sustainability outcomes in Islamic primary education.

### Keywords

Akidah Akhlak; Ecological Education; 3R Program; Character Education



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## INTRODUCTION

Environmental degradation is no longer a distant ecological issue but a visible and persistent reality within school environments, reflected in students' daily habits such as excessive plastic use, unmanaged waste, and low environmental responsibility. In Indonesia, these challenges persist despite the implementation of various environmental programs, indicating that environmental problems are not merely technical but are fundamentally rooted in values, attitudes, and behavioral orientations (Sari & Nugroho, 2023; Stevenson, 2017; UNESCO, 2017). This condition highlights the limitation of education systems in transforming environmental awareness into consistent and sustainable behavior.

However, current educational practices reveal significant weaknesses in addressing this issue. Environmental education in schools is often implemented in a procedural and activity-based manner, such as recycling campaigns or 3R (Reduce, Reuse, Recycle) initiatives, without being systematically integrated into formal curriculum structures and value-based learning processes (Frisk & Larson, 2016; Gough & Scott, 2020; Monroe & Plate, 2019; Tilbury, 2019). As a result, students may participate in environmental activities without internalizing their ethical meaning, leading to a persistent gap between environmental knowledge and actual behavior.

Within the context of Islamic primary education, particularly in *madrasah ibtidaiyah*, education is inherently oriented toward character formation grounded in religious values. The subject of *Akidah Akhlak* plays a central role in developing students' faith (*iman*) and moral conduct (*akhlaq*) through key theological principles such as *tawhid* (belief in the oneness of God), *amanah* (trust and responsibility), and *khalifah* (human stewardship of the earth). These principles provide a strong normative foundation for ecological responsibility, positioning environmental care not merely as a social obligation but as a form of spiritual accountability (Rahman & Aziz, 2022).

Nevertheless, a critical disjunction persists between theological instruction and students' lived ecological behavior within Islamic primary education. In many *madrasah* contexts, *Akidah Akhlak* instruction remains predominantly normative, text-centered, and cognitively oriented, emphasizing doctrinal comprehension rather than contextual moral praxis. Environmental programs, on the other hand, are frequently implemented as technical or extracurricular initiatives that are detached from students' theological consciousness and religious value systems. Consequently, *aqidah* (faith) and *akhlaq* (ethical conduct) often operate within separate pedagogical domains, thereby weakening the transformative capacity of Islamic education to cultivate environmentally responsible behavior and

sustainable moral awareness (Fahmi & Susilo, 2020; Hidayat & Anwar, 2021).

A growing body of research has examined environmental education and character formation from various perspectives. Ardoin et al. (2020) demonstrated that experiential environmental learning significantly enhances students' ecological awareness and pro-environmental behavior through active engagement and contextual practice (Ardoin et al., 2020; Chawla & Derr, 2019). Similarly, Evans et al. (2021) emphasized that participatory sustainability education fosters stronger behavioral commitment when students are directly involved in environmental activities within their daily learning environment (Bourn, 2020; Evans et al., 2021). In the field of moral and religious education, Hidayat and Anwar (2021) found that habituation, teacher exemplification, and value internalization play a crucial role in strengthening students' moral character development in Islamic schools (Fahmi & Susilo, 2020; Hidayat & Anwar, 2021). Lickona (2019) further argued that effective character education requires the integration of moral knowing, moral feeling, and moral action to ensure sustainable behavioral transformation. Meanwhile, Rahman (2022) highlighted that Islamic teachings provide a strong ethical and theological foundation for environmental stewardship; however, their implementation in educational practice remains largely symbolic and insufficiently integrated into structured learning activities.

More recent studies also reinforce the urgency of integrating sustainability education with value-based Islamic learning. Lutfauziah et al. (2023) demonstrated that environmental education curricula in Islamic boarding schools can support sustainable development through integrative and context-based learning approaches (Lutfauziah, 2023; Rieckmann, 2018). Similarly, Hasyim et al. (2023) emphasized that Islamic perspectives on environmental sustainability provide ethical and theological foundations for strengthening students' ecological responsibility (Hasyim et al., 2023; Jackson, 2018). Hafiz (2023) further found that integrating Islamic Religious Education values into environmental education not only improves ecological awareness but also reinforces students' spiritual and moral consciousness toward environmental preservation.

Although these studies provide important insights, several conceptual and empirical limitations remain evident. First, previous environmental education studies primarily emphasize ecological practices and behavioral outcomes without incorporating theological dimensions as the epistemological foundation of environmental ethics. Second, research on Akidah Akhlak education generally focuses on moral and religious character formation without explicitly linking these values to ecological responsibility and sustainability-oriented behavior. Third, prior studies tend to

examine environmental education and Islamic moral education as separate disciplinary domains, resulting in limited exploration of integrative pedagogical models within madrasah contexts. Fourth, only a few studies have investigated how Islamic theological values can be operationalized through experiential and school-based environmental programs capable of transforming students' daily behavior. Consequently, there remains a significant research gap concerning the integration of Akidah Akhlak values and ecological education through contextual, practice-oriented, and sustainability-based learning models in Madrasah Ibtidaiyah.

Responding to this gap, the present study offers both conceptual and practical novelty by investigating the integration of Akidah Akhlak values through the ALAMKU 3R (Reduce, Reuse, Recycle) program at Madrasah Ibtidaiyah. Unlike previous studies that position religious learning and environmental education as separate educational agendas, this study conceptualizes ecological practices as a medium for internalizing Islamic theological consciousness, moral responsibility, and sustainable behavior simultaneously. Furthermore, this research contributes an integrative framework that connects aqidah, akhlaq, and ecological responsibility within everyday school culture through habituation, participatory practice, and value-based environmental activities (Kristjánsson, 2021; Nucci & Narvaez, 2021). In this regard, the study not only expands the discourse of Islamic character education but also offers an alternative model for sustainability-oriented Islamic education at the primary school level.

Furthermore, existing research is generally limited to descriptive evaluations of programs or isolated instructional strategies, without proposing a coherent and systematic integration model that connects theological values, moral habituation, and ecological practices within both curriculum design and school culture. Empirical studies that operationalize Islamic theological principles into observable and measurable environmental behavior remain scarce, particularly in primary education contexts.

This condition reveals a clear research gap: the absence of a comprehensive and structured framework that integrates Akidah Akhlak values with ecological education in a way that is conceptually grounded, operationally implementable, and culturally embedded. This study introduces a three-layer faith-based ecological integration model that systematically transforms Akidah Akhlak theological principles into measurable environmental behavior within primary Islamic education.

Addressing this gap, the present study examines the integration of Akidah Akhlak values into ecological education through the ALAMKU (Aksi Lingkungan Madrasahku) 3R program at MI Ma'arif Pagerwojo. Employing a descriptive approach, this study seeks to elucidate how Islamic ethical values are systematically embedded within environmental learning practices, how such integration is operationalized through both classroom instruction and school-based cultural habituation, and how these processes collectively contribute to the development of students' ecological character.

## **METHOD**

This study employed a qualitative case study design to examine the integration of Akidah Akhlak values into ecological education through the ALAMKU (3R) program at MI Ma'arif Pagerwojo. The study was grounded in an interpretivist paradigm, which assumes that ecological character formation is socially constructed through the interaction between theological meaning systems and institutional practices. A case study approach was selected because it enables an in-depth exploration of a bounded system within its real-life institutional context (Yin, 2020).

The research was conducted during the 2024/2025 academic year over a three-month period, specifically from February to April 2025. The unit of analysis was the institutional model of faith-based ecological integration implemented through the ALAMKU program. Participants were selected using purposive sampling based on their direct involvement in curriculum planning, instructional implementation, and environmental program activities. The participants consisted of one headmaster, one Akidah Akhlak teacher, two classroom teachers, and twenty-four students actively participating in the program. This sampling strategy ensured that data reflected multiple perspectives on conceptual planning, operational execution, and cultural institutionalization of ecological values.

Data were collected using three complementary techniques to ensure methodological triangulation. First, semi-structured interviews were conducted with the headmaster and teachers to explore curriculum integration processes, theological foundations (tawhid, amanah, and khalifah), instructional strategies, and perceived impacts on students' ecological character. Second, non-participant observations were carried out in classroom and school settings to document how Akidah Akhlak values were embedded in learning activities, daily routines, and structured 3R practices (reduce, reuse, recycle). Observations focused on teacher modeling, student participation,

and behavioral consistency. Third, document analysis was conducted on lesson plans (RPP), school environmental policies, student project outputs, and waste monitoring records to identify formal and measurable evidence of integration. Interviews were audio-recorded and transcribed verbatim, while observational data were documented through systematic field notes.

Data analysis followed the interactive qualitative analysis model proposed by Miles, Huberman, and Saldaña (2020), which consists of data condensation, data display, and conclusion drawing and verification (Miles et al., 2020). During the data condensation phase, the researcher coded and categorized data into three analytical themes aligned with the research objectives: (1) forms of integration at the conceptual level, (2) implementation strategies at the operational level, and (3) impacts on ecological character formation at the cultural level. Data were then organized into thematic matrices to identify relationships between theological concepts, moral habituation processes, and ecological practices. Conclusions were developed through iterative comparison across interviews, observations, and documents to construct a coherent three-level integrative model.

To ensure trustworthiness and research rigor (Nowell & Norris, 2021; Yin, 2020), this study applied credibility, dependability, and confirmability strategies in line with contemporary qualitative research standards (Nowell et al., 2021; Yin, 2020). Credibility was strengthened through source triangulation (teachers, students, and institutional documents) and methodological triangulation (interviews, observations, and documentation). Member checking was conducted by sharing preliminary findings with key informants to validate interpretations. Prolonged engagement in the field and systematic documentation of analytic decisions (audit trail) were implemented to enhance dependability and minimize researcher bias.

The research framework conceptualized integration across three interconnected dimensions: theological foundation (faith-based values), moral habituation (character internalization), and ecological practice (3R behavioral implementation). These dimensions operated within two domains—classroom instruction and school culture—forming a structured model of faith-based ecological education (Rahman & Aziz, 2022; UNESCO, 2020). This framework guided data collection, coding, and interpretation to ensure coherence between research objectives, methodological procedures, and reported findings.

## **FINDINGS AND DISCUSSION**

### **Findings**

The findings are organized into three analytical categories derived from the coding process and aligned with the research objectives: (1) conceptual integration of Akidah Akhlak values, (2) operational and cultural implementation strategies, and (3) the impact on students' ecological character formation. All findings are supported by triangulated data from observations, interviews, and document analysis to ensure empirical validity.

### **Conceptual Integration of Akidah Akhlak Values**

At the conceptual level, the integration of Akidah Akhlak values into ecological education was systematically embedded in curriculum planning and instructional design. Document analysis of lesson plans (RPP) revealed that environmental themes were explicitly incorporated into learning objectives, materials, and assessment indicators. Several lesson plans demonstrated direct alignment between theological concepts and ecological responsibility, such as linking amanah (responsibility) with environmental care and khalifah (stewardship) with sustainable behavior. These findings indicate that ecological values were formally institutionalized within the curriculum structure (Kebudayaan, 2022; UNESCO, 2020).

This alignment was further confirmed through interview data. The Akidah Akhlak teacher explained that environmental responsibility was framed as part of religious obligation: "We teach environmental stewardship as part of the trust from Allah, not merely as a social obligation, but also as an act of worship.

Similarly, the headmaster emphasized that environmental programs were intentionally designed to align with students' spiritual development: "The environmental program in this madrasah is designed to be aligned with students' values of faith."

Observational data supported these findings, showing that teachers consistently connected theological concepts with environmental practices during classroom instruction. For example, discussions of khalifah were directly linked to students' responsibility to maintain cleanliness and manage waste.

These results indicate that the integration occurred not merely at the level of activities but was structurally embedded within both curricular and theological frameworks. The coherence between documents, teacher perspectives, and classroom practices reflects a deliberate and systematic integration process.

## Operational and Cultural Implementation Strategies

At the operational level, the integration was implemented through structured ecological practices within the ALAMKU (3R) program, which were embedded into daily learning routines. Observational data showed that students consistently engaged in environmentally responsible behaviors, including using reusable containers, separating organic and inorganic waste, and recycling plastic materials into creative products. These practices were not conducted as occasional activities but were integrated into daily classroom procedures, ensuring continuous reinforcement of ecological values (Boeve-de Pauw & Van Petegem, 2017; Widodo & Suryani, 2020).



**Figure 1.** Waste Management Facilities in the ALAMKU Program

This figure presents waste segregation bins and a plastic bottle donation box as part of the ALAMKU (3R) program implementation. These facilities support students' habituation in sorting, reducing, and recycling waste, reflecting the integration of ecological values into daily school practices.



**Figure 2.** Creative Recycling Products from Plastic Waste in the ALAMKU Program

This figure presents students' creative products made from reused plastic materials, including decorated containers and animal-shaped crafts. These activities represent the implementation of the *reuse* and *recycle* components of the ALAMKU (3R) program, reflecting students' active participation in transforming waste into functional and artistic items as part of ecological character development.

Interview data highlighted the importance of teacher modeling in reinforcing these practices. One teacher stated: "We do not merely instruct students; we also set a direct example by bringing our own drinking bottles and sorting waste." Students also demonstrated an understanding of the connection between environmental behavior and religious values. As expressed by one student: "If we litter, it is not good because we are obligated to preserve the trust given by Allah."

Document analysis further confirmed that these practices were institutionally supported. School documents, including environmental program guidelines and activity schedules, showed that the ALAMKU program was formally structured and systematically implemented across the school environment.

At the cultural level, observational findings revealed that ecological practices had become part of the school's daily habits. Students were observed independently maintaining cleanliness, separating waste without instruction, and reminding peers to follow environmental rules. This indicates a shift from externally regulated behavior to internalized ecological responsibility. Overall, these findings demonstrate that the integration extended beyond operational implementation and became embedded within the school's cultural system.

### **Impact on Students' Ecological Character Formation**

The integration model resulted in both measurable environmental outcomes and observable behavioral transformation among students.

Document analysis of school waste monitoring records indicated a significant reduction in plastic waste following the implementation of the ALAMKU program. Prior to integration, the average volume of plastic waste reached approximately 5 kg per week. After three months of consistent implementation, this figure decreased to approximately 1 kg per week, representing a reduction of nearly 80%.

**Table 1.** Plastic Waste Reduction Before and After Program Implementation

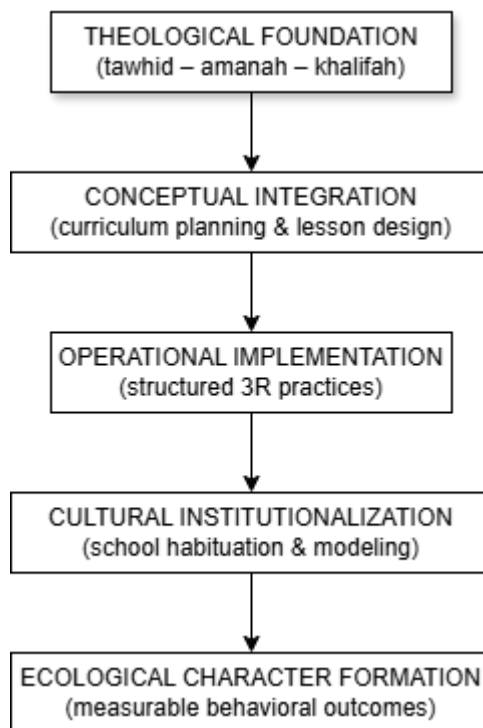
Period	Average Plastic Waste per Week
Before Program	±5 kg
After Program	±1 kg

Source: School Waste Monitoring Record and Observation Data

These quantitative findings were supported by observational data, which showed increased student discipline in waste management, consistent use of reusable materials, and active participation in environmental activities.

Interview data further indicated significant changes in students' attitudes and awareness. Teachers reported that students demonstrated increased independence in maintaining environmental practices: "Students are now accustomed to sorting waste without being instructed, and they even remind one another to do so."

Students also expressed a deeper understanding of environmental responsibility as part of religious practice, indicating successful value internalization: "Protecting the environment is part of worship." These findings demonstrate that the integration of Akidah Akhlak values into ecological education contributed not only to environmental improvements but also to the development of students' ecological character. The transformation observed reflects the interaction between theological understanding, structured habituation, and institutional reinforcement.



**Figure 3.** Three-Level Faith-Based Ecological Integration Model

Figure 3 illustrates the structured integration model identified in this study, demonstrating how theological foundations are systematically translated into ecological character formation through curricular and cultural mechanisms.

## Discussion

The findings demonstrate that the integration of Akidah Akhlak values into ecological education through the ALAMKU program operates across conceptual, operational, and cultural dimensions. This multi-layered integration supports contemporary sustainability education frameworks that emphasize the importance of value-based ecological learning rather than purely technical environmental instruction. International research indicates that sustainability initiatives are more effective when supported by ethical meaning structures that shape long-term behavioral commitment (Ardoin et al., 2020; Wamsler, 2020). The present study confirms this perspective by showing that theological foundations function as moral drivers of ecological practice.

At the conceptual level, the integration of *tawhid*, *amanah*, and *khalifah* within curriculum planning reflects a value-centered sustainability approach. UNESCO (2020) highlights that Education for Sustainable Development (ESD) requires embedding normative competencies—such as responsibility and ethical awareness—into formal learning structures. However, global ESD discourse is often framed within secular ethical paradigms. This study extends that framework by demonstrating how Islamic theological constructs can operationalize normative sustainability competencies in faith-based educational contexts. Environmental stewardship was not positioned as a civic obligation alone but as a form of spiritual accountability, thereby strengthening students' intrinsic motivation.

The operational implementation of structured 3R practices aligns with experiential learning theories, which argue that behavioral engagement enhances internalization of values (Evans et al., 2021; Wamsler, 2020). Consistent with international findings, hands-on ecological activities improve environmental awareness when supported by reflective processes. In this study, reflection sessions after environmental activities reinforced the linkage between practice and theological meaning, ensuring that action was interpreted through a religious lens rather than as procedural compliance. This integration of cognition, affect, and behavior supports holistic character development models in moral education (Nucci & Narvaez, 2021).

The cultural dimension of integration further illustrates the importance of institutional reinforcement in sustaining ecological character formation. Research in sustainability education

emphasizes that school culture significantly influences long-term environmental behavior (Boevende Pauw & Van Petegem, 2017; Evans et al., 2021). The findings show that ecological routines at MI Ma'arif Pagerwojo gradually shifted from externally supervised compliance to internally regulated habits. This transition indicates successful moral internalization, consistent with contemporary character education theory, which posits that habituation and modeling are critical mechanisms for durable character formation (Kristjánsson, 2021).

The measurable reduction of plastic waste—approximately 80% within three months (Tilbury, 2019; UNESCO, 2020) demonstrates that faith-based ecological education can generate observable environmental outcomes. While many sustainability initiatives report increased awareness, empirical evidence of behavioral consistency remains limited in previous studies. The structured integration model presented in this research suggests that embedding ecological responsibility within transcendental accountability enhances behavioral sustainability. The dual moral orientation—vertical accountability to God and horizontal responsibility toward society and the environment—creates a reinforced motivational structure that may explain the program's effectiveness.

Environmental behavior in this study was not shaped solely through external regulation or disciplinary mechanisms but through an internal process of moral consciousness rooted in theological understanding. This finding is important because many school-based environmental programs tend to rely on compliance-oriented approaches in which students participate due to institutional rules rather than intrinsic awareness. In contrast, the ALAMKU program demonstrates that when ecological practices are connected to religious meaning systems, students develop stronger emotional attachment and moral responsibility toward environmental preservation. The integration of theological concepts into ecological routines enabled environmental behavior to be interpreted as part of students' spiritual identity rather than merely as institutional obligation (Frisk & Larson, 2016; Wamsler, 2020).

This process reflects the broader concept of transformative learning in sustainability education, where behavioral change emerges from shifts in worldview, values, and personal meaning structures. Wamsler (2020) argues that sustainability education becomes more effective when learners experience emotional and ethical engagement in addition to cognitive understanding. The present study supports this argument by showing that theological reflection strengthened students' personal connection with ecological action. Environmental care was not only understood

cognitively but also experienced affectively through repeated religiously framed practices. Consequently, students gradually demonstrated behavioral consistency even without direct supervision from teachers.

The findings also indicate that ecological character formation is strengthened when environmental education is embedded within school culture rather than implemented as isolated projects. In many educational institutions, sustainability programs are often temporary, ceremonial, or dependent on external campaigns. Such approaches frequently fail to produce long-term behavioral transformation because ecological values are not integrated into students' daily routines and institutional norms. In contrast, the ALAMKU program institutionalized ecological practices through continuous habituation, classroom procedures, and collective participation, thereby creating a sustainable moral ecosystem within the school environment (Boeve-de Pauw & Van Petegem, 2017; Evans et al., 2021).

Another significant contribution of this study lies in its demonstration that theological values can function not only as abstract moral principles but also as operational educational instruments. Previous studies generally position religious values as normative ethical foundations without clearly explaining how these values are translated into concrete educational practices (Arifin, 2019; Hasyim et al., 2023). This study expands existing literature by illustrating how the principles of tawhid, amanah, and khalifah were operationalized through waste management routines, recycling activities, and participatory environmental practices. In this regard, theological concepts became directly observable through students' daily behavior and institutional culture.

The integration model identified in this study also contributes to discussions concerning contextualized Islamic education. Contemporary Islamic education discourse increasingly emphasizes the importance of connecting doctrinal instruction with real-life social and environmental challenges (Bourn, 2020; Kebudayaan, 2022). However, many educational practices remain heavily text-oriented and less connected to contextual problem solving. The ALAMKU program provides an example of how Islamic theological instruction can be transformed into experiential learning that addresses contemporary ecological issues while maintaining religious authenticity. This indicates that Islamic education possesses strong potential to contribute to sustainability discourse when theological principles are interpreted within practical social contexts.

Moreover, the findings reveal the importance of teacher exemplification in strengthening ecological character development. Teachers in this study did not merely function as transmitters of

knowledge but also acted as moral models who demonstrated environmentally responsible behavior in daily school activities. Character education scholars emphasize that moral habituation becomes more effective when supported by consistent adult modeling within educational environments (Kristjánsson, 2021; Lickona, 2019). Students are more likely to internalize ecological values when they observe congruence between instructional messages and teachers' actual behavior. The consistency demonstrated by teachers in sorting waste, reducing plastic use, and participating in ecological routines contributed significantly to the legitimacy and effectiveness of the program.

The participatory dimension of the ALAMKU program also played a crucial role in strengthening students' environmental responsibility. Students were not positioned as passive recipients of environmental instruction but as active participants in ecological activities (Ardoin et al., 2020; Chawla & Derr, 2019). Participatory engagement allowed students to experience environmental responsibility directly through collective action and collaborative routines. This experiential dimension is particularly important in primary education because students at this developmental stage tend to internalize values more effectively through concrete action and repeated practice than through abstract explanation alone.

In addition, the findings demonstrate that ecological education in faith-based institutions can support broader educational goals beyond environmental awareness alone. The integration process contributed to the development of discipline, cooperation, responsibility, and social sensitivity among students. These outcomes indicate that sustainability-oriented learning may simultaneously strengthen broader dimensions of character education (Lickona, 2019; Nucci & Narvaez, 2021). Therefore, ecological education should not be viewed as an additional curricular burden but as an integrative medium for holistic student development.

The present study also provides practical implications for educational policymakers and curriculum developers. The findings suggest that sustainability education in Islamic schools may become more effective when integrated within religious learning subjects (Hafiz, 2023; Rahman & Aziz, 2022) rather than implemented separately as extracurricular activities. Curriculum integration enables environmental values to become part of students' moral worldview and learning experience simultaneously. Educational institutions may therefore consider developing interdisciplinary sustainability models that connect ecological issues with religious, ethical, and social dimensions of learning.

Furthermore, the integration framework proposed in this study may contribute to strengthening the implementation of Indonesia's Kurikulum Merdeka, which prioritizes contextual, student-centered, and character-based learning (Kebudayaan, 2022). The ALAMKU program reflects these principles by combining experiential learning, collaborative participation, and contextual problem solving within students' everyday environment. This alignment indicates that faith-based ecological education can support national educational reform agendas while preserving institutional religious identity.

An additional dimension emerging from this study concerns the relationship between ecological habituation and long-term behavioral sustainability. Many environmental education programs encounter difficulties in maintaining students' behavioral consistency once institutional supervision decreases. Behavioral transformation often remains temporary because environmental responsibility is introduced as a situational activity rather than as an integrated moral orientation. The findings of this study suggest that the sustainability of ecological behavior is strengthened when environmental practices are repeatedly reinforced through theological narratives, collective routines, and institutional culture. Students gradually developed a perception that environmental care was not merely associated with school regulations but represented a continuous moral obligation connected to their faith identity (Fahmi & Susilo, 2020; Hidayat & Anwar, 2021).

This finding is particularly important within the broader discourse of sustainability education because long-term ecological transformation requires more than cognitive environmental literacy alone. Contemporary sustainability scholars increasingly emphasize the importance of emotional engagement, ethical commitment, and identity formation in shaping durable pro-environmental behavior. In this study, repeated participation in ecological routines enabled students to construct personal meaning around environmental responsibility. As ecological action became integrated with religious understanding, students demonstrated greater behavioral consistency and self-regulation even in the absence of direct teacher intervention. This indicates that theological internalization may function as a stabilizing mechanism for sustaining environmentally responsible behavior over time.

Furthermore, the integration model identified in this study demonstrates the importance of connecting local institutional culture with global sustainability discourse. While Education for Sustainable Development (ESD) is often presented through universal frameworks, implementation at the school level requires contextual adaptation that reflects students' cultural and moral realities.

The ALAMKU program illustrates how global sustainability principles can be translated into locally meaningful educational practices through Islamic theological values familiar to students' daily lives (Arifin, 2019; Hasyim et al., 2023). This contextualization process strengthens students' sense of relevance and ownership toward ecological activities, thereby increasing the effectiveness of sustainability-oriented learning.

The findings also imply that faith-based educational institutions possess significant potential to contribute to environmental sustainability movements at the community level. Students who internalize ecological responsibility within school environments may extend these practices into family and social contexts, creating broader social influence beyond the classroom. Therefore, faith-based ecological education should not only be understood as an internal character-building strategy but also as a potential mechanism for cultivating socially transformative environmental awareness (Tilbury, 2019; UNESCO, 2020) within wider society.

Theoretically, this study contributes to expanding sustainability education discourse by proposing a contextualized faith-based integration model. Rather than treating religious education and environmental programs as parallel domains, the model conceptualizes them as interdependent components within a unified character formation framework. This integrative perspective addresses the fragmentation identified in previous literature and offers a structured approach applicable to Islamic primary schools.

Moreover, the findings support emerging scholarship that calls for culturally responsive sustainability education (UNESCO, 2020; Wamsler, 2020). By embedding environmental ethics within Islamic theological foundations, the study demonstrates how local belief systems can strengthen global sustainability goals. This contextual adaptation is particularly relevant in religious educational institutions where moral authority is closely tied to theological legitimacy.

Despite its contributions, the study is limited to a single institutional case, which may restrict broader generalization. Future research could apply comparative or mixed-method designs to examine the replicability of the three-level integration model across different madrasah contexts or educational systems.

Overall, the findings indicate that faith-based ecological education, when systematically integrated at conceptual, operational, and cultural levels, can produce both measurable environmental outcomes and sustainable character transformation. The integration of theological meaning structures into sustainability practice represents a promising direction for holistic

education in religious contexts.

Although this study was conducted within a single institutional context, the proposed three-level integration model is designed as a contextual-replicable framework rather than a universal prescription. The model does not depend on specific institutional characteristics but on structural alignment between theological instruction, structured ecological practice, and school culture. Therefore, while contextual adaptation is necessary, the integrative principles may be replicated in other madrasah or faith-based primary education settings with similar curricular structures.

The proposed integration model is also aligned with current national educational reforms in Indonesia, particularly the implementation of Kurikulum Merdeka, which emphasizes character development and contextual learning. Furthermore, the structured ecological practices resonate with the objectives of the national Adiwiyata program, which promotes environmentally responsible school culture. By embedding sustainability within Akidah Akhlak instruction, the model strengthens the coherence between national character education goals and faith-based institutional identity.

## CONCLUSION

This study concludes that the integration of Akidah Akhlak values into ecological education through the ALAMKU (3R) program demonstrates a coherent and systematic model operating across conceptual, operational, and cultural dimensions. The alignment between theological foundations (tawhid, amanah, and khalifah), structured 3R practices, and institutional habituation processes enables environmental responsibility to be internalized as part of students' religious character. Ecological care, therefore, is transformed from a procedural school activity into a faith-driven moral commitment embedded within daily behavior.

Theoretically, this research contributes to the development of sustainability education by proposing a structured faith-based ecological integration model within Islamic primary education. The study extends existing Education for Sustainable Development (ESD) discourse by demonstrating how transcendental accountability can function as a motivational driver of sustainable behavior. The three-level integration model—conceptual, operational, and cultural—offers a coherent framework that connects doctrinal instruction with measurable ecological outcomes.

Practically, the findings provide an implementable model for madrasahs seeking to

institutionalize sustainability-based character education. By embedding environmental stewardship within Akidah Akhlak instruction and school culture, educational institutions can strengthen the coherence between belief systems and behavioral practices. The model may serve as a reference for curriculum developers, school leaders, and policymakers in designing spiritually grounded environmental programs.

The findings also imply that ecological sustainability in Islamic education should be approached not only as an environmental agenda but also as a moral and spiritual educational mission. The integration model identified in this study demonstrates that environmental awareness becomes more sustainable when students perceive ecological responsibility as part of their religious identity and ethical obligation. Through the systematic integration of theological understanding, behavioral habituation, and participatory ecological practice, sustainability education can move beyond symbolic environmental campaigns toward long-term character transformation. This perspective reinforces the relevance of Islamic educational institutions in responding to contemporary global ecological challenges while simultaneously strengthening students' moral and spiritual development.

Nevertheless, this study is limited to a single-case context, which may restrict broader generalization. Future research is recommended to examine the replicability of the proposed integration model across diverse educational settings or through comparative and mixed-method approaches to further validate its long-term impact on ecological character formation.

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