

Islamic Values in Environmental School Culture: Character Formation and Challenges

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ABSTRACT

This study aims to examine how Islamic values are integrated into the environmental school culture within the Adiwiyata program and to analyze the internal challenges in value internalization that affect the formation of students' ecological character. Employing a qualitative multicase study approach, data were collected from two Adiwiyata schools—MAN 1 Lamongan and SMAN 1 Lamongan—through interviews, observations, and document analysis involving 26 purposively selected participants. The findings reveal that core Islamic values such as *tauhid*, *khalifah*, *amanah*, and *ihsan* are embedded in school culture through a three-layered model of organizational culture (basic assumptions, espoused values, and artifacts). Moreover, the study identifies a seven-stage integrative process of value internalization—from establishing foundational beliefs to engaging with external stakeholders—which facilitates a transformative and sustainable environmental culture in schools. Despite these efforts, challenges persist, particularly in aligning symbolic practices with deeper spiritual consciousness among teachers and students. Theoretically, this study contributes to the development of an Islamic-based educational model for environmental character formation by proposing a contextual and replicable framework that bridges spirituality, institutional culture, and ecological pedagogy. Practically, the model offers strategic guidance for Islamic schools and policymakers to foster value-based environmental programs that extend beyond administrative compliance toward long-term behavioral change.

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1. INTRODUCTION

Environmental preservation has emerged as an urgent global concern, demanding tangible responses across multiple sectors, including education. In the context of Islamic education, the theological concept of *khalifatullah fil ardh* (human stewardship of the Earth) underpins a core ethical responsibility to protect and sustain the environment (Sukarsono et al., 2021). Islamic education plays a vital role in cultivating environmental awareness among youth by embedding ethical and moral values rooted in religious teachings (Sukarsono et al., 2021).

As integral components of society, schools hold transformative potential to foster sustainable practices and ecological consciousness among students, teachers, and the broader school community. Hence, examining how Islamic values are integrated into environmentally oriented school cultures—particularly through the Adiwiyata program—is essential to understanding the mechanisms of ecological character formation in Islamic educational settings.

Environmental education (EE) research in Indonesia has evolved alongside increasing awareness of ecological issues. Early studies focused on teacher knowledge and attitudes toward environmental problems (Prabawa-Sear, 2018), gradually shifting toward analyzing the impact of instructional strategies on student attitudes (Parker et al., 2018) (Prabawa-Sear, 2018). The launch of the Adiwiyata program by Indonesia's Ministry of Environment and Ministry of Education in 2006 spurred a new wave of research exploring its implementation and effectiveness in shaping student attitudes and behavior (Nurwidodo et al., 2019; Wibowo et al., 2023). However, concerns have been raised about the program's emphasis on competition and symbolic achievements, which can overshadow the essence of authentic environmental learning (Parker et al., 2018; Prabawa-Sear, 2018).

Recent studies such as (Tanubrata et al., 2024) have quantitatively examined the mediating role of environmental awareness in the relationship between school culture and green school implementation. Others, like (Sukarsono et al., 2021), have mapped out teacher orientations within Adiwiyata but stopped short of analyzing how these orientations translate into student character development. (Wibowo et al., 2023) used the New Ecological Paradigm (NEP) scale and found only moderate levels of environmental concern among Adiwiyata students, with gender-based variations. Yet, there remains a lack of in-depth studies exploring how Islamic values are structurally and culturally internalized within Adiwiyata schools, particularly through a multi-case design in Islamic and public school contexts.

Interest in integrating Islamic values into environmental education has grown across educational levels. (Thohri, 2024) emphasizes the need for an environmentally conscious Islamic Education (PAI) curriculum that nurtures both ecological awareness and moral accountability. At the secondary level, (Amrullah et al., 2025) illustrate how Islamic values are embedded in curricular and extracurricular school activities. (Kriger & Seng, 2005) highlight spirituality as a mediating factor in pro-environmental behavior among university students, although their study lacks institutional depth. (Rohmatulloh et al., 2023) further advocate for an Islamic ESD (Education for Sustainable Development) approach within doctoral programs in Islamic educational management.

This article contributes to the field by offering a novel multi-case study that not only illustrates the integration of Islamic values such as tauhid, khalifah, amanah, and ihsan but also outlines a structured, reflective process for embedding these values into all aspects of school life under the Adiwiyata program. Drawing from two distinct institutional settings—MAN and SMAN—this study reveals that faith-based environmental culture does not emerge instantaneously but through a layered institutional transformation demanding continuous reflection. The study proposes an Islamic value-based pedagogical model for ecological education that is both spiritual and transformative.

Although studies like (Tanubrata et al., 2024) confirm the influence of pro-environmental school culture, they do not explore the integration of religious values in detail. Similarly, (Sukarsono et al., 2021) offer insights into teacher orientations but lack an analysis of how these values affect student behavior. (Wibowo et al., 2023) reveal that mere participation in Adiwiyata is insufficient to cultivate deep ecological character, particularly when Islamic moral frameworks are not adequately embedded.

Thus, this research seeks to fill that gap by examining how Islamic values are internalized in the cultural fabric of Adiwiyata schools and how these processes shape ecological character among students. Specifically, the study aims to:

1. Analyze how Islamic values (e.g., tauhid, mizan, and khalifah) are integrated into school policies, visions, and daily practices related to environmental conservation.
2. Explore the challenges faced by school communities in internalizing Islamic ecological values

Theoretically, the study contributes to a deeper understanding of how faith-based values shape school culture and character education, an area often overlooked in mainstream environmental education research. Practically, the findings provide strategic insights for Islamic school leaders and policymakers to design more effective, value-driven Adiwiyata programs rooted in authentic spiritual ethics (Indonesia, 2014).

2. METHODS

This study employed a qualitative approach with a multiple case study design (Yin, 2018), focusing on the integration of Islamic values within environmental school culture in the context of the Adiwiyata program. The research was conducted at two secondary schools in Lamongan, East Java—MAN 1 Lamongan and SMAN 1 Lamongan—which were selected based on their strong environmental orientation and recognition as "Adiwiyata Mandiri" schools. These schools, operating under different ministries (the Ministry of Religious Affairs and the Ministry of Education and Culture, respectively), represent contrasting yet complementary contexts for examining the intersection of religious values and environmental education.

Framed within a constructivist-interpretive paradigm and informed by a phenomenological orientation, the study aimed to explore how members of school communities understand, live out, and internalize Islamic ecological values. Data were collected over a twelve-month period using triangulated methods: semi-structured interviews, participant and non-participant observations, and document analysis. The interviews were used to capture in-depth narratives from informants about their experiences and the challenges involved in value internalization. Observations allowed the researcher to record environmental practices and school interactions that reflected value integration in daily life. Meanwhile, documents—such as school vision and mission statements, Adiwiyata-related policies, lesson plans, and campaign materials—provided contextual and institutional insights.

A total of 26 participants were purposively selected from both schools, including school principals and vice principals (4), Adiwiyata team teachers (8), students (10), and school support staff (4). The criteria for selection emphasized participants' involvement in or awareness of environmental and Islamic values integration within their respective institutions.

Data were analyzed using thematic analysis, following the steps of data condensation, data display, and conclusion drawing, in line with the approach of Miles, Huberman, and Saldaña (Miles et al., 2014). The process was iterative and interpretive, allowing emergent themes to be refined through repeated engagement with the data. The researcher served as the primary instrument, with sensitivity to meaning and context enhanced through continuous reflective journaling and field memos (Merriam, 2009).

To ensure the trustworthiness of findings, multiple strategies were employed. Triangulation of data sources and collection techniques was used to validate emerging interpretations (Creswell & Creswell, 2017). In addition, member checking was conducted with key informants to verify the accuracy of interpreted meanings. Peer debriefing sessions were held with academic supervisors and colleagues to enhance analytical rigor and reduce bias. Together, these strategies contributed to the study's credibility, dependability, and confirmability.

3. FINDINGS AND DISCUSSION

This section presents the key findings of the study, which explores how Islamic values are embedded and enacted within the environmental culture of two Adiwiyata schools. Drawing on Schein's three-layered model of organizational culture, we traced how these values are not only articulated in official vision statements and policy documents but also manifested in daily routines, symbolic practices, and the interaction patterns of school members. These findings offer an entry point for understanding the dynamic interplay between spiritual values and institutional culture in shaping authentic ecological character among students.

a. Designing Environmental Islamic School Culture

The design of an Islamic environmental school culture within the Adiwiyata framework must be understood as a systematic integration of Islamic spiritual values, institutional educational norms, and environmental praxis. Based on a multi-case study at MAN 1 Lamongan and SMAN 1 Lamongan, this research found that school culture is shaped through three interconnected layers as described by Schein (Schein, 2010): basic assumptions, espoused values, and artifacts. These layers work together to form a living, dynamic, and contextually grounded organizational culture that supports the development of environmentally conscious character.

Schein's model is particularly useful in analyzing how Islamic values are embedded in the environmental ethos of Adiwiyata schools in Indonesia. It was chosen over other cultural frameworks because it links visible practices with underlying belief systems, mirroring how Islamic educational values permeate both formal structures and spiritual orientation.

At the core, the basic assumptions reflect the Islamic worldview of humans as stewards (*khalifah*) of the Earth, forming the moral and spiritual foundation for all environmental activities. These assumptions are expressed in institutional values such as responsibility, excellence, and ecological concern—internalized in the school's vision and mission, curricular plans, and daily routines. Finally, these values materialize in observable artifacts such as symbols, daily practices, environmental activities, Adiwiyata monuments, posters, and institutional documents.

To illustrate this conceptual structure, Figure 1 presents the relationship between the three cultural layers, positioning Islamic values as the foundation, educational values as the bridge, and environmental practices as the manifestation.

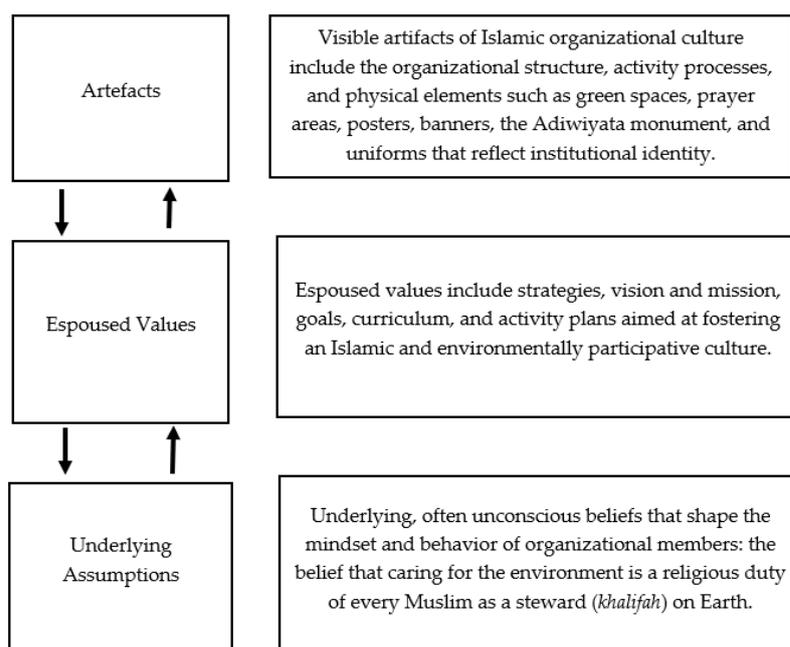


Figure 1. Organizational Culture Design of Adiwiyata Schools Based on Islamic Values

The diagram shows how Islamic assumptions (e.g., khalifah) support institutional values (e.g., excellence, care, responsibility), which are then enacted through school management strategies, vision, mission, curriculum, and action plans—manifesting in tangible artifacts such as clean-up campaigns, ablution water reuse, Islamic ecological slogans, and more.

In MAN 1 Lamongan, the spiritual values underpinning basic assumptions are not merely discursive but actively shape school members' attitudes. The school principal shared, "Everything starts from faith. Cleanliness is part of faith, and as Muslims, we are khalifah entrusted by Allah to care for the environment." The Adiwiyata team leader added, "We frame all Adiwiyata programs as acts of worship." This shows how spiritual values serve as affective and ideological drivers.

Although not formally an Islamic school, SMAN 1 Lamongan also integrates religious values into its Adiwiyata activities. The principal explained that universal moral values—responsibility, care, and sustainability—align with students' religious beliefs, as most are Muslim. "We relate environmental programs to religious values, often in harmony with students' faith." A PAI teacher at SMAN 1 further reinforces this integration by teaching *ihsan* toward nature as an expression of faith.

Both schools express environmental concern and excellence in their vision and mission statements. MAN 1 Lamongan declares: "A school excelling in achievement, skills, noble character, and environmental culture," while SMAN 1 states: "Globally competitive, excellent in science and faith, and environmentally conscious." While the former emphasizes Islamic moral excellence (*akhlak karimah*), the latter highlights faith and science (IMTAQ and IPTEK), both merging religiosity with ecological responsibility.

Environmental values also appear in participatory planning, school rules, and day-to-day practices—such as waste separation policies, littering bans, and student cleaning duties—demonstrating that these values are not merely rhetorical but operational.

At the artifact level, Islamic environmental values are visible in various symbolic and practical expressions, particularly at MAN 1 Lamongan. These include Adiwiyata monuments, Qur'anic calligraphy on environmental posters, hadiths on cleanliness, and creative reuse of ablution water for gardening. A standout practice is *Jumat Bersih* (Clean Friday), which integrates physical cleanliness with thematic religious studies addressing ecological issues.

At SMAN 1 Lamongan, cultural artifacts include Adiwiyata monuments and posters on environmental ethics in every corner, fostering a visually educative environment. A teacher shared that students are encouraged not only to learn technical skills like waste sorting, but also to reflect on the moral responsibility humans have toward the Earth.

Student engagement is facilitated through the Environmental Care Community (KOPLING), a student-led organization guided by the Adiwiyata team in both schools. KOPLING participates in waste management, tree planting, water and energy conservation campaigns, peer education, and support for environmental programs.

These artifacts confirm that environmental care is embedded in daily school routines. While not always explicitly linked to Islamic doctrine, the values expressed through practice and symbolism reflect a holistic integration of religiosity, ecological awareness, and character education. This suggests that environmental culture in schools can be cultivated through a harmonious blend of spiritual, social, and ecological values.

Overall, the three cultural layers—beliefs, values, and actions—interact synergistically. Religious assumptions drive institutional values, which are expressed in sustained, tangible practices.

The environmental culture of Adiwiyata schools is shaped by a strong Islamic ontological foundation within the school community. Values such as *tauhid*, *khalifah*, *amanah*, and *ihsan* are not merely theological dogmas, but serve as spiritual and moral justifications for environmental initiatives. At MAN 1 Lamongan, these values frame environmental stewardship as a form of worship, not just administrative compliance—echoing (Khalid, 2002) perspective that Islamic environmental ethics derive from a cosmological understanding of nature as a divine trust .

Transformational leadership also plays a pivotal role. Principals act not only as administrators but as moral leaders who bridge spiritual vision with institutional policies. They embed ecological values into the school's vision, curriculum, and regulations. Collective engagement from teachers and students further deepens internalization through spiritually motivated participation. As (Schein, 2010) Schein asserts, organizational culture endures when values, symbols, and routines are consistently enacted by all members .

This culture is also reinforced by normative and social structures. Institutional documents—such as lesson plans, habituation programs, and extracurricular activities—demonstrate alignment between Islamic values and Adiwiyata goals. Support from parents, local communities, and environmental agencies fosters a social ecosystem that sustains environmental culture. The broader social integration of Islamic values ensures that the school's environmental culture is not merely a program, but part of a value-driven ecological movement.

These findings affirm (Tilbury, 2011) argument that Education for Sustainable Development (ESD) becomes transformative only when local and spiritual values are internalized in education policy. Islam offers a rich repository of environmental ethics (Gueye & Mohamed, 2022; Saniotis, 2012). The Adiwiyata schools studied here exemplify how Islamic values like tauhid, khalifah, and amanah serve as foundations for building environmental culture (Mohamed, 2014). Thus, ESD in these schools is not applied normatively but lived as an expression of collective spiritual commitment.

Moreover, the results align with theories emphasizing the integration of Islamic principles in ecological awareness. Prior studies have shown that Islam upholds principles of balance (*mīzān*), prohibition of destruction (*fasād*), and collective responsibility for creation (Hayat et al., 2023; Hilal & Sisdianto, 2024; Ismail & Firas, 2024). These principles are reflected in institutional practices such as reusing ablution water, protecting school trees, and implementing values-based learning—demonstrating that Islamic ecological understanding is not merely conceptual but embedded in institutional routines.

Success in faith-based environmental education is closely linked to spiritual leadership and culturally grounded symbolism (Kriger & Seng, 2005). This is evident in the role of school leaders who embed Islamic values through language, narratives, and symbolic systems—such as Qur'anic verses on school gates. These symbols not only foster allegiance but build a value ecosystem uniting the entire school community.

A key contribution of this study is mapping the interaction between three roles of school members (as Muslims, as educational actors, and as Adiwiyata participants) and the three layers of organizational culture (basic assumptions, espoused values, and artifacts). This integrated approach contrasts with prior research that tends to separate religious and ecological dimensions or isolate personal values from institutional structures. It positions this study within global discourses on value-based education and proposes a replicable model of Islamic ecological school culture.

b. Internalizing Islamic Environmental Values: From Policy to Practice

The development of Islamic values-based organizational culture in Adiwiyata schools can be understood as a seven-stage integrative process: (1) Establishing foundational values and assumptions; (2) Strengthening institutional structures through Adiwiyata teams; (3) Context mapping and action planning via Environmental Potential and Problem Identification (IPMLH); (4) Integrating values into curriculum and learning; (5) Participatory implementation and value internalization through PBLHS (Environmentally Friendly School Culture Movement); (6) Ongoing evaluation and adaptation; and (7) Building synergy with external stakeholders. Together, these stages form a transformative framework that aligns Islamic theological values with the ecological mission of the Adiwiyata program.

The first stage involves setting foundational values through participatory and democratic processes. At both MAN 1 and SMAN 1 Lamongan, values like amanah, responsibility, and ihsan toward nature are rooted in the Islamic concept of humans as khalifah. These values were not imposed by top-down authority but formulated through inclusive forums involving school leaders, teachers,

and school committees. They are then documented in school vision and mission statements, as well as embedded into strategic priorities.

The second stage focuses on institutionalizing these values through the formation of the Adiwiyata team. These teams were composed not only of school leadership and teachers but also the school committee, with selection based on moral qualities as well as formal roles. At SMAN 1 Lamongan, the team bridges vision and practice; at MAN 1 Lamongan, it also plays a mentoring and role-modeling function.

The third stage entails participatory and reflective environmental assessments through IPMLH. Teachers and students collaborate in observing sanitation, waste management, and green space. Beyond physical inventory, this stage examines whether behaviors align with Islamic ecological responsibility. Findings inform local and spiritually contextualized action plans reflected in school self-evaluations and medium-term development plans.

The fourth stage involves embedding these values into formal and informal curricula. At MAN 1 Lamongan, ecological values are linked to khalifah and moral character in KTSP, lesson plans, and Ma'had activities. At SMAN 1 Lamongan, IMTAQ values serve as a foundation in subjects like Biology and Islamic Education. This integration shows that values are not supplementary but serve as conceptual frames, positioning the curriculum as a tool for cultural transformation.

The fifth stage manifests in participatory implementation through community-based initiatives such as KOPLING. These student-led groups engage peers in activities like sanitation maintenance, plant care, waste management, and resource conservation. Simple routines like classroom cleaning and mindful water use serve as tangible pathways to value internalization. Teachers and principals model this behavior, showing that cultural change stems from consistent, faith-driven action.

The sixth stage centers on evaluating PBLHS implementation—not only physically, but attitudinally and behaviorally. Tools such as reflective journals, daily observation, and evaluation forums assess students' moral knowledge, feelings, and actions. Feedback loops refine strategies, emphasizing that culture change is a dynamic, reflective process.

The seventh stage extends values through collaboration with external stakeholders. At SMAN 1 Lamongan, partnerships with the Environmental Agency facilitated training in waste management using accessible technology. Both schools maintain partnerships with local government, health centers, NGOs like Tunas Hijau, and international forums like the Global Youth Conference, enriching perspectives and positioning schools as networked environmental change agents.

These seven stages demonstrate that Islamic value-based culture development in Adiwiyata schools is not linear or mechanical but dynamic and contextual. Values are embedded in institutional structures, curricula, daily routines, and broader social ecosystems, resulting in a living culture driven by spiritual responsibility rather than mere compliance.

This study confirms that Islamic environmental value internalization occurs through structured, phased processes—both managerial and cultural. These stages form a socio-pedagogical system that integrates spirituality, institutional policy, and daily habit. This continuity between spiritual belief and institutional structure is key; the Islamic concept of khalifah fuels internal motivation for ecological action (Rohmatulloh et al., 2023).

This value-based approach aligns with the view that spiritual motivation supports sustained ecological commitment. When environmental programs are framed as acts of worship or sadaqah jariyah, they inspire deeper and more lasting engagement from students and teachers, who see their actions as religious responsibilities, not administrative tasks (Amrullah et al., 2025; Bensaid, 2018; Masturin, 2014). Programs at schools like SMAN 2 and 7 Malang reflect this through initiatives like SMANDA Darling and Sabhatansa Cinta Lingkungan, combining Islamic values with digital and manual approaches to plant classification.

The community-based education model in Islamic Adiwiyata schools also plays a strategic role. Active involvement of students, teachers, and school leaders fosters dialogue and consensus at every stage. Communal values such as mutual cooperation, collective responsibility, and Islamic manners

toward nature are not only taught but reinforced through daily narratives, symbols, and routines (Amrullah et al., 2025; Zabidi et al., 2021). Community participation in programs like Sumbang Dulur Sumbang Desa in Malang and Clean Friday in Lamongan exemplify this approach.

An integrative learning structure further supports internalization. Environmental themes are woven into lesson plans and cross-disciplinary teaching, connecting formal curricula to students' lived experiences. Environmental education becomes a holistic character formation strategy encompassing cognitive, affective, and psychomotor domains (Abd Rahman et al., 2020; Amrullah et al., 2025; Parker, 2018), reflecting a structural educational philosophy.

Recent studies underscore the importance of involving students in environmental monitoring as part of building ecological literacy and collective responsibility. For example, (Lynch et al., 2017) found that school-community collaborations in monitoring projects create dynamic learning cycles where students become local change agents. (Kane et al., 2022; Pitt et al., 2019) stress the importance of contextualized programs for optimal impact. In this regard, reflective, participatory evaluation methods—such as personal journals and evaluation forums, as seen in Malang and Lamongan—are highly relevant.

These studies reinforce the value of holistic evaluation in Islamic environmental education. Assessment should not only measure student knowledge but also affective growth and behavioral engagement. Effective evaluation blends behavioral observation, value reflection, and student-led transformation—serving both as assessment and learning tool (Amrullah et al., 2025; Hilal & Sisdianto, 2024).

Overall, this discussion shows that internalizing Islamic environmental values requires more than policy and curriculum—it demands an ecosystemic approach. This includes spiritual engagement, institutional alignment, participatory learning, and cultural symbolism, manifesting in practices like environmentally friendly mosque facilities and religiously infused environmental routines (Amrullah et al., 2025).

Ultimately, evaluation is not only about what students know, but who they are becoming. By integrating iman, ilm, and amal, Adiwiyata schools have the potential to serve as living laboratories of relevant, contextual, and transformative environmental education. Scaling this approach across diverse local contexts may significantly contribute to global character education for planetary sustainability (Amrullah et al., 2025).

c. From Values to Character: Manifestations of Environmental Care

The process of internalizing values at MAN 1 Lamongan and SMAN 1 Lamongan goes beyond symbolic or normative levels, evolving into the development of ecological character rooted in Islamic teachings. The integration of these values into programs, policies, and role modeling suggests a substantial approach to environmental education. This section focuses on how those values manifest in students' real behaviors that reflect environmental care.

To understand this manifestation, Lickona's character education framework is used, consisting of three key dimensions: moral knowing, moral feeling, and moral action. Moral knowing refers to students' understanding of environmental concepts and relevant Islamic values. Moral feeling involves emotional awareness such as empathy and care for nature (Lickona, 2013). Moral action measures how students consistently act to preserve and protect the environment. Together, these dimensions form a comprehensive basis for evaluating Islamic value-based environmental character development.

Findings on moral knowing indicate that students' understanding of Islamic environmental ethics is progressing positively. Surveys and in-depth interviews revealed that most students could articulate the link between religious teachings and ecological responsibility, especially regarding the concept of humans as khalifah and the preservation of creation as an act of faith. Environmental themes are embedded in subjects like Islamic Education, Natural Sciences, and supported by religious studies and literacy programs. Survey data showed that 87% of students understood practical aspects of environmental care, such as cleanliness, drainage, waste management, tree maintenance, and resource

conservation. However, only 52% demonstrated deep conceptual understanding of their spiritual identity as khalifah, suggesting that while procedural knowledge is strong, theological motivation still requires reinforcement.

In the domain of moral feeling, most students at both schools demonstrated affective awareness. Around 81% of students showed emotional connection to nature, expressing concern over environmental damage and feeling personally responsible for sustainability. This emotional attachment was reflected in voluntary participation in greening initiatives, waste programs, and environmental campaigns. These findings underscore the role of Islamic value-based education in shaping an emotional foundation for environmental character.

Regarding moral action, 80% of students actively participated in school-based ecological activities such as regular clean-ups, waste bank management, plant care, and conservation campaigns. Some students also showed personal initiative, such as reminding peers to avoid littering or care for green spaces. These actions indicate that values have moved from abstract understanding to habitual, socially embedded behavior, affirming the success of Islamic internalization in shaping sustainable ecological character.

However, the findings also revealed inconsistencies. At MAN 1 Lamongan, for example, a teacher noted that, “some students still litter, use plastic bottles, and artificial decorations remain common. We acknowledge that Adiwiyata implementation is still incomplete” (Interview, September 4, 2024).

Additionally, students involved in environmental organizations like KOPLING exhibited higher levels of knowledge, affective attitude, and ecological engagement compared to non-members. This suggests that sustained involvement in experiential activities enhances internalization.

In SMAN 1 Lamongan, observations found a mismatch between school policy and daily practice. Despite regulations to reduce single-use plastics, school canteens still distributed plastic items, and not all students actively engaged with the issue. This points to a gap between promoted values, institutional policies, and actual behaviors, particularly in affective and reflective dimensions.

Environmental character was often more pronounced in ceremonial and symbolic activities such as Clean Friday, class clean-up contests, and poster campaigns. While these foster collective engagement, subtler aspects like consistent waste disposal, water conservation, and plastic reduction varied between individuals and over time. As the Adiwiyata team leader at MAN 1 acknowledged, enthusiasm peaked during competitions but declined without external motivation (Interview, October 28, 2024). This highlights that deep and continuous internalization—not symbolic events—is crucial for sustainable character formation.

These findings confirm that integrating Islamic values into environmental education can significantly shape students’ ecological awareness. This aligns with (Begum et al., 2011; Nurwidodo et al., 2019), who emphasize the sustainability of religiously grounded environmental care. Integrating emotional experience, Islamic spirituality, and practical environmental education supports long-term behavioral change, as shown by (Shaharil et al., 2014). Rice notes that religious environmental ethics significantly influence personal and collective environmental behaviors (Rice, 2006).

Nonetheless, value internalization is rarely linear. Deeper insight into internalization challenges—among students and educators—is needed to develop pedagogical and cultural strategies that are both contextual and effective (Demirtaş et al., 2024; Yli-Panula et al., 2022).

In Muslim communities, religious teachings shape consumption patterns and sustainability attitudes (Alam et al., 2011; Ateeq-Ur-Rehman et al., 2010). While religiosity can underpin ecological awareness, this study also reveals that consistent environmentally conscious behavior remains uneven. This supports Wibowo, who found student environmental attitudes in Adiwiyata schools to be moderate (Wibowo et al., 2023). Parker similarly noted discrepancies between students’ environmental self-identity and behavior (Parker, 2018). Prabawa-Sear further highlights that environmental education in Indonesia is often driven by competition, leading to symbolic over substantive learning outcomes (Prabawa-Sear, 2018). As Kollmuss and Agyeman suggest, the knowledge–attitude–behavior

gap is shaped by intrinsic motivation, affective experience, and clarity of values (Kollmuss & Agyeman, 2002).

Without reflective habits, spiritual depth, and consistent moral leadership, Islamic values risk remaining symbolic. The core challenge lies not only in curriculum design, but in cultivating deep moral attachment and sustainable action.

This reveals a crucial gap between structural value integration and authentic value ownership. Despite explicit inclusion of Islamic values in school culture, their behavioral embodiment remains uneven. The main challenge in environmental character education is not merely programmatic design but fostering deep moral connection, ecological self-awareness, and behavioral consistency.

Therefore, the future of Islamic environmental education depends on sustained reflection, cultural support, and leadership that bridges belief and action—enabling values to become lived realities in students' everyday ecological practices.

d. Challenges in Deep Value Internalization

While both schools in this study have made considerable efforts to institutionalize environmental values through formal structures and school-wide programs, translating these values into personally held beliefs and consistent, value-driven behaviors remains an ongoing challenge. The findings indicate that the shift from symbolic compliance and task-oriented participation toward the development of genuine ecological character rooted in Islamic values has yet to reach its full potential.

To better understand these internalization challenges, it is essential to distinguish between internal and external barriers faced by schools. Internal challenges are primarily psychological and pedagogical. At MAN 1 Lamongan and SMAN 1 Lamongan, teachers and students often view the Adiwiyata program as a formal obligation rather than a meaningful spiritual process. The absence of reflective space in daily learning—such as contextual theological discussions or spiritually rooted ecological narratives—limits students' capacity for deep value internalization. Furthermore, inconsistent modeling by teachers regarding sustainability and Islamic ethics weakens moral transmission, which, as Lickona argues, is critical in character education. A prevailing culture of administrative compliance encourages students to participate in programs out of obligation, rather than lived conviction (Lickona, 2013).

Externally, systemic factors also pose significant obstacles. A culture of competition in Adiwiyata implementation—often driven by awards and formal achievements—can detract from the value-oriented essence of environmental education. Prabawa-Sear describes this as a shift from “learning” to “winning.” Pressure from government agencies to meet quantitative success indicators, such as scores or visual documentation, further reinforces an instrumental approach (Prabawa-Sear, 2018). Teacher and student involvement often spikes near evaluation periods but declines afterward. The lack of institutional support for spiritual value-based pedagogy also restricts innovation among educators seeking Islamic transformative approaches. Without broader policy transformation and institutional backing, Islamic environmental internalization risks remaining symbolic and unsustainable.

These findings echo, who caution that structural adherence to environmental programs, if not paired with affective and reflective depth, may result in superficial ecological attitudes. In an Islamic Adiwiyata context, environmental care should go beyond symbolism and policy compliance, reaching into the moral consciousness anchored in Islamic spirituality par (Parker, 2018; Wibowo et al., 2023). This study reinforces the need for reflective learning environments—within curriculum, classroom guidance, and daily practices—where students and teachers can explore values through contextual ethical dialogue. Without this, internalization may remain fragmented, fragile, and unsustainable. The issue is not merely the absence of environmental content but the lack of cultural and pedagogical infrastructure enabling the transformation from knowing, to being, and ultimately to doing, in line with Islamic ethics.

Patterns observed suggest that value internalization in Adiwiyata schools tends to be more structural and symbolic than personal and reflective. Without mechanisms for ongoing reflection, peer

modeling, and religious meaning-making, the shift from values to character remains incomplete. School leaders and curriculum developers must play a critical role—not just as organizers, but as architects of moral and spiritual alignment through authentic educational spaces.

Compared to studies like Begum and Shaharil, which show positive outcomes of religious integration in environmental awareness, this study highlights that successful internalization depends heavily on reflective practice and school culture quality (Begum et al., 2011; Shaharil et al., 2014). Merely integrating religious values into programs is insufficient without systemic and transformative pedagogical support. While past research often emphasizes the formal success of religious environmental education, this study emphasizes the need for authentic engagement between students, Islamic values, and their ecological experiences. Thus, it offers a critical and context-sensitive perspective that complements existing literature, particularly within Indonesian Islamic school contexts.

Theoretically, this research contributes to the conceptual development of Islamic value-based character education within environmental contexts. By stressing the integration of religious values, ecological awareness, and reflective pedagogy, it expands the educational discourse from technocratic to holistic and transformative. Practically, the findings point to new directions for curriculum and school policy development that are spiritually grounded and contextually relevant. Islamic schools implementing *Adiwiyata* should move beyond administrative indicators and build cultural infrastructures that enable reflection, modeling, and spiritual embodiment in daily learning. In doing so, this article strengthens the discourse and practice of environmental character education that is holistic, grounded, and deeply aligned with Islamic and Indonesian contexts.

4. CONCLUSION

This study set out to examine how Islamic values are integrated into environmentally conscious school cultures and to identify the challenges associated with internalizing these values in shaping students' character. The findings reveal that core values such as *tauhid*, *khalifah*, *amanah*, and *ihsan* are embedded in the schools' visions, curricula, policies, and everyday practices, through a three-layered cultural framework: basic assumptions, espoused values, and observable artifacts. Moreover, the research outlines seven integrative stages in the internalization process—ranging from foundational value-setting, institutional structuring, contextual mapping, curriculum integration, participatory implementation, reflective evaluation, to external collaboration—all of which together form a transformational framework rooted in Islamic principles.

While these values have been structurally and symbolically promoted, the internalization process remains uneven due to challenges such as limited spiritual depth, inconsistent teacher role modeling, and externally driven administrative pressures. In response, transformative leadership, spiritually grounded reflective pedagogy, and collective community engagement emerge as critical elements for cultivating a sustainable ecological character among students.

Theoretically, this study contributes to the discourse on Islamic environmental education by mapping a systemic model that synthesizes religious values, transformative pedagogy, and institutional practice. Practically, it offers a context-sensitive and spiritually informed framework for school leaders and policymakers to design environmental education strategies that go beyond administrative compliance. Future research is encouraged to test the effectiveness of this model in broader and longitudinal settings, to deepen value internalization and foster authentic ecological behavior change among learners.

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