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INTEGRATING ECOLOGICAL TAWḤĪD VALUES INTO ISLAMIC RELIGIOUS EDUCATION CURRICULUM MANAGEMENT: IMPLICATIONS FOR ISLAMIC EDUCATIONAL EPISTEMOLOGY

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ABSTRAK

Penelitian ini mengkaji integrasi nilai-nilai tawḥīd ekologis dalam pengelolaan kurikulum Pendidikan Agama Islam (PAI) di Madrasah Aliyah Swasta Daarul Falah, Kabupaten Serang, Indonesia. Dengan menggunakan desain studi kasus kualitatif, data dikumpulkan melalui wawancara, observasi, analisis dokumen, serta kuesioner persepsi peserta didik sebagai data pendukung. Penelitian ini bertujuan untuk mengeksplorasi bagaimana nilai-nilai tawḥīd ekologis diintegrasikan ke dalam perencanaan, pelaksanaan, dan evaluasi kurikulum, serta implikasinya terhadap epistemologi pendidikan Islam. Hasil penelitian menunjukkan bahwa nilai-nilai tawḥīd ekologis telah terintegrasi dalam berbagai aspek pengelolaan kurikulum. Analisis dokumen menunjukkan bahwa sekitar 75% modul pembelajaran memuat tema lingkungan dan āyāt kauniyyah, sementara sekitar 80% program tahunan sekolah mencakup kegiatan ekologis. Hasil observasi kelas juga menunjukkan bahwa tema-tema lingkungan terintegrasi dalam sekitar 75% sesi pembelajaran yang diamati melalui pendekatan kontekstual dan berbasis proyek. Selain itu, data kuesioner menunjukkan bahwa 81% peserta didik menyatakan bahwa kegiatan pembelajaran membantu mereka memahami dengan lebih baik hubungan antara tawḥīd dan tanggung jawab ekologis. Penelitian ini menunjukkan bahwa integrasi nilai-nilai tawḥīd ekologis berkontribusi dalam memperkuat kesadaran religius-ekologis peserta didik serta mendukung pendekatan pendidikan Islam yang lebih integratif dengan menghubungkan prinsip-prinsip teologis dan tantangan lingkungan kontemporer. Temuan ini berkontribusi pada diskusi mengenai epistemologi pendidikan Islam dengan menunjukkan bagaimana nilai-nilai ekologis dapat diintegrasikan ke dalam praktik pengelolaan kurikulum di lembaga pendidikan Islam.

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Keywords:

Ecological Tawḥīd; Curriculum Management; Islamic Religious Education; Religious-Ecological Awareness; Environmental Education

ABSTRACTS

This study examines the integration of ecological tawḥīd values into the management of the Islamic Religious Education (PAI) curriculum at Daarul Falah Madrasah Aliyah, Serang Regency, Indonesia. Using a qualitative case study design, data were collected through interviews, observations, document analysis, and supporting student perception questionnaires. The study aimed to explore how ecological tawḥīd values are incorporated into curriculum planning, implementation, and evaluation, as well as their implications for Islamic educational epistemology. The findings indicate that ecological tawḥīd values have been integrated into various aspects of curriculum management. Document analysis showed that approximately 75% of teaching modules incorporated environmental themes and āyāt kauniyyah, while around 80% of annual school programs included ecological activities. Classroom observations further suggested that environmental themes were integrated into approximately 75% of observed learning sessions through contextual and project-based approaches. In addition, questionnaire data indicated that 81% of students reported that the learning activities helped them better understand the relationship between tawḥīd and ecological responsibility. The study suggests that the integration of ecological tawḥīd values contributes to strengthening students' religious-ecological awareness and supports a more integrative approach to Islamic education that connects theological principles with contemporary environmental challenges. These findings contribute to discussions on Islamic educational epistemology by illustrating how ecological values can be incorporated into curriculum management practices in Islamic educational institutions.

A. INTRODUCTION

The global ecological crisis of the 21st century has become one of the greatest challenges to the sustainability of human life. Various international scientific reports indicate that climate change, biodiversity loss, and ecosystem degradation are occurring on an increasingly broad and complex scale (IPBES, 2019). These phenomena not only impact the physical environment but also affect global social, economic, and political stability. In contemporary scientific studies, this situation is often associated with the emergence of the Anthropocene era, a period when human activity has become a major force influencing the Earth's systems (Steffen et al., 2015). In this era, industrial activity, urbanization, and intensive exploitation of natural resources have significantly altered the planet's ecological balance.

Numerous studies have emphasized that the modern ecological crisis cannot be understood solely as a technical or industrial issue. Rather, it is also related to the knowledge paradigm underlying humanity's relationship with nature. (Raworth, 2017) emphasizes that modern development models often view nature as an economic resource that can be exploited without limit. This paradigm contributes to the emergence of exploitative relationships between humans and the environment. Therefore, several scholars emphasize that solutions to the environmental crisis cannot be achieved solely through technological innovation or environmental policies, but also require a transformation of the knowledge paradigm that changes how humans understand their relationship with nature (Holfelder, 2019).

In this context, education plays a strategic role in building public ecological awareness. Education is seen as a crucial tool for shaping the way future generations think about the relationship between humans, the environment, and the sustainability of life. The Education for Sustainable Development (ESD) approach, developed in various international educational forums, emphasizes the importance of systematically integrating sustainability values into curricula, educational institution governance, and learning practices (Leal Filho, 2018). Through this approach, education serves not only as a medium for transferring environmental knowledge but also as a space for developing critical competencies, ethical responsibility, and intergenerational awareness of the earth's sustainability (Wals, 2019).

However, various studies show that the implementation of sustainability education in many educational institutions still faces a number of limitations. (Holfelder, 2019) explains that environmental education often focuses on technical aspects such as resource conservation or climate change mitigation, but pays little attention to the philosophical and ethical dimensions underlying the relationship between humans and nature. As a result, environmental education tends to be fragmented and unable to build holistic ecological awareness. Several studies also emphasize that the success of sustainability education depends heavily on the integration of moral, spiritual, and cultural values that can foster deeper ecological awareness (Tilbury, 2017).

In religious societies, a spiritual value-based approach holds great potential for building sustainable environmental ethics. Religion not only provides a normative framework for the relationship between humans and nature but also provides a strong moral foundation for maintaining ecological balance (Gade, 2019a). In the Islamic tradition, the relationship between humans and nature has a strong theological foundation through the concepts of tawḥīd, khilāfah, and amanah. The principle of tawhid not only affirms the oneness of God as the center of Islamic ontology but also reflects the cosmic unity of all creation within a harmonious divine order (Nasr, 1996). From this perspective, nature is understood as part of the signs of divinity (āyāt kauniyyah) that contain both spiritual and epistemological meaning.

Based on this perspective, humans are seen as caliphs on earth who have a moral responsibility to maintain the balance of nature. The concept of caliphate emphasizes that humans are not the absolute owners of nature, but rather guardians entrusted with the responsibility to manage its resources responsibly. Therefore, excessive environmental exploitation contradicts the principle of balance (mīzān), which is an essential part of ecological ethics in Islam (Khalid, 2019). In the development of Islamic ecotheology studies, several scholars assert that the modern environmental crisis can also be understood as a spiritual crisis reflecting humanity's loss of awareness of the sanctity of nature (Gade, 2019b).

In this study, ecological tawḥīd is conceptualized not merely as a theological doctrine but as an educational and managerial framework that guides curriculum development and educational practice. Ecological tawḥīd refers to the integration of the principles of divine unity, stewardship (khalīfah), trust (amanah), and balance (mīzān) into educational processes aimed at fostering environmentally responsible behavior.

Operationally, ecological tawḥīd is manifested through three interconnected dimensions. First, the theological dimension emphasizes the understanding of nature as a manifestation of divine signs (āyāt kauniyyah) and environmental care as part of religious devotion. Second, the ethical dimension promotes values of responsibility, moderation, sustainability, and environmental justice. Third, the educational dimension focuses on translating these values into curriculum content, learning activities, school programs, and evaluation practices. Through these dimensions, ecological tawḥīd functions as a conceptual bridge between Islamic teachings and environmental education.

Theoretical Foundation of Ecological Tawḥīd

The concept of ecological tawḥīd is rooted in the Islamic worldview that emphasizes the unity of God and the interconnectedness of all creation. Within this perspective, nature is not merely a physical resource but a manifestation of divine signs (āyāt kauniyyah) that reflect God's wisdom and sovereignty. Human beings, as khalīfah (vicegerents) on earth, are entrusted with the responsibility to maintain ecological balance (mīzān) and prevent environmental degradation (fasād fī al-arḍ).

From an educational perspective, ecological tawḥīd extends beyond environmental ethics and functions as an epistemological framework that integrates theological, ethical, and ecological dimensions of knowledge. This framework challenges the separation between religious learning and environmental responsibility by positioning environmental stewardship as an integral expression of Islamic faith and practice.

Accordingly, the integration of ecological tawḥīd into curriculum management can be understood as a process of embedding Islamic ecological values into curriculum planning, implementation, and evaluation. Such integration enables educational institutions to connect religious knowledge with contemporary environmental challenges while preserving the holistic nature of Islamic education.

Although these theological concepts have strong relevance to environmental sustainability issues, their implementation in Islamic educational practice still faces various limitations. In the context of Islamic Religious Education (PAI), the concept of monotheism is often taught in a normative and doctrinal manner, emphasizing aspects of faith and ritual worship. This approach tends to separate the theological dimension from the ecological realities facing contemporary society. Several studies have shown that religious education curricula in various educational institutions have not fully integrated sustainability perspectives and environmental ethics into the learning process (Jannah, 2019). As a result, the theological values embodied in Islamic teachings have not been fully connected to human ecological responsibility in social life.

From an educational management perspective, the successful internalization of values in the learning process depends heavily on a systematic and structured curriculum design. The curriculum serves not only as an academic document that organizes learning materials but also as a strategic instrument for directing value transformation within educational institutions (Bush, 2020). The curriculum management process involves various interrelated stages, from planning and implementation to evaluation. Each stage plays a crucial role in ensuring that the values intended to be instilled in students are internalized effectively and sustainably (Liu & Hallinger, 2018).

However, studies on the integration of ecological values in Islamic education have focused primarily on the theological and philosophical dimensions. Most research on Islamic ecotheology discusses concepts such as tawhid (monotheism), khalifah (vicegerent), and amanah (trust) as the basis of environmental ethics in Islam. However, research directly linking these concepts to the practice of Islamic Religious Education curriculum management remains relatively limited. This gap indicates that the discourse of Islamic ecotheology has not yet been fully connected to the practice of educational management in formal institutions. These differing perspectives have also given rise to several hypotheses in contemporary Islamic education studies. Some scholars argue that religious education is sufficient to instill moral and spiritual values without the need to explicitly integrate ecological issues into the curriculum. However,

others assert that the global environmental crisis demands a reconstruction of the epistemology of religious education to be more responsive to modern ecological challenges (Gade, 2019). This debate demonstrates the importance of research that can bridge the theological dimension with concrete educational practices.

Based on this background, this study aims to analyze the integration of ecological tawḥīd values into the management of Islamic Religious Education curriculum and its implications for discussions on Islamic educational epistemology in the context of contemporary environmental challenges. This study also seeks to examine how theological values related to the relationship between humans and nature can be systematically integrated into curriculum design and learning practices in educational institutions.

In this study, Islamic Religious Education (Pendidikan Agama Islam/PAI) refers specifically to the curriculum, teaching, and learning processes associated with the PAI subject in Islamic secondary education. The term Islamic education is used in a broader sense to encompass institutional, curricular, pedagogical, and managerial dimensions of education informed by Islamic values. Meanwhile, Islamic educational epistemology refers to the philosophical foundations that shape the sources, purposes, and construction of knowledge within Islamic education. Ecological tawḥīd is positioned as a theological framework that informs both educational values and epistemological orientations related to environmental responsibility.

In general, this study shows that the integration of ecological tawḥīd values into Islamic Religious Education curriculum management can strengthen the internalization of environmental ethics in Islamic education. This integration not only expands the theological meaning of tawḥīd in a social and ecological context but also encourages the emergence of an educational paradigm that places cosmic unity and ecological responsibility as an integral part of student character formation. Thus, this study is expected to provide a conceptual contribution to the development of Islamic education that is more responsive to the global ecological crisis. Furthermore, this study is also expected to broaden academic discourse on Islamic educational epistemology, particularly in integrating theological, ecological, and pedagogical dimensions within a holistic framework.

Previous studies have examined environmental education in Islamic schools, the integration of ecological values in Islamic Religious Education, and the role of religious teachings in fostering environmental awareness. These studies generally demonstrate that Islamic values can provide an ethical foundation for environmental responsibility. However, most existing research focuses on learning content, environmental ethics, or students' ecological attitudes. Limited attention has been given to how ecological tawḥīd values are systematically integrated into curriculum management processes, particularly in the dimensions of planning, implementation, and evaluation within Islamic educational institutions.

Furthermore, previous studies tend to discuss ecological tawḥīd as a theological or ethical concept rather than as a managerial framework for curriculum development. Consequently, there remains a gap in understanding how ecological tawḥīd can function as an organizing principle in curriculum management and how such integration may

contribute to broader discussions on Islamic educational epistemology. Addressing this gap, the present study investigates the integration of ecological tawḥīd values into the management of the Islamic Religious Education curriculum at Daarul Falah Madrasah Aliyah, Serang Regency, Indonesia.

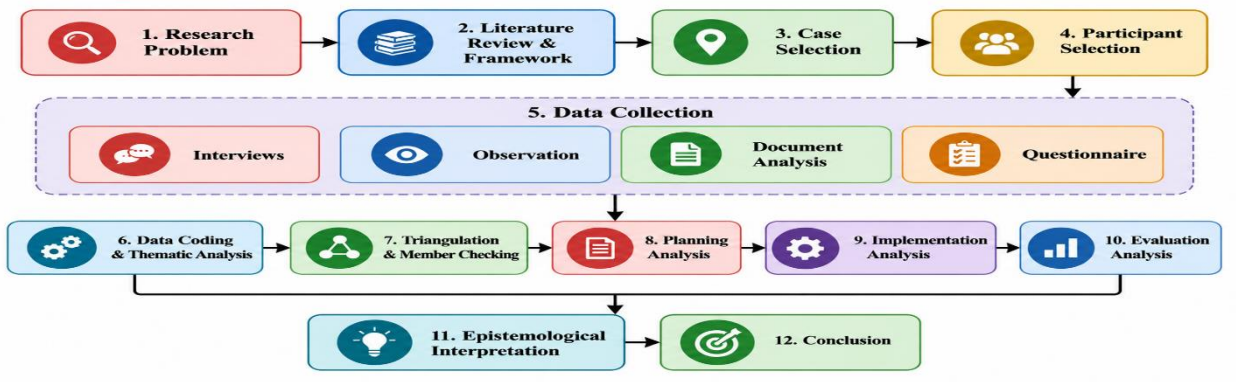
Although previous studies have discussed environmental education in Islamic schools, eco-theological perspectives in Islamic education, and the integration of environmental values into Islamic Religious Education, most of these studies primarily focus on environmental ethics, student attitudes, or learning content. Limited attention has been paid to how ecological tawḥīd values are systematically embedded within curriculum management processes, particularly in the areas of curriculum planning, implementation, and evaluation.

Furthermore, existing studies generally conceptualize ecological tawḥīd as a theological or ethical framework rather than examining its role as a managerial principle guiding curriculum development and educational practice. Consequently, there remains insufficient understanding of how ecological tawḥīd can be operationalized within curriculum management and how such integration may shape broader discussions concerning Islamic educational epistemology. This study addresses that gap by investigating the integration of ecological tawḥīd values into the management of the Islamic Religious Education curriculum at Daarul Falah Madrasah Aliyah, Serang Regency, Indonesia.

B. METHOD

This study employed a qualitative case study design to explore the integration of ecological tawḥīd values into the management of the Islamic Religious Education (PAI) curriculum at Daarul Falah Madrasah Aliyah, Serang Regency, Banten Province, Indonesia. A qualitative case study is particularly suitable for investigating contemporary phenomena within their real-life context, especially when the boundaries between the phenomenon and context are not clearly evident (Yin, 2018). This approach enables researchers to gain an in-depth understanding of educational processes, institutional practices, and participants' experiences within a specific setting (Merriam & Tisdell, 2016). Accordingly, the present study focused on understanding how ecological tawḥīd values were incorporated into curriculum planning, implementation, and evaluation, as well as their implications for fostering students' religious-ecological awareness.

Figure 1. Research Procedure Flowchart



Participants were selected using purposive sampling to ensure that individuals possessed relevant knowledge and experience regarding curriculum management and ecological learning practices. Purposive sampling is widely employed in qualitative research because it allows researchers to select information-rich participants capable of providing deep insights into the phenomenon under investigation (Patton, 2015). A total of 72 participants were involved in the study, consisting of one principal, one vice principal for curriculum affairs, five Islamic Religious Education (PAI) teachers, and sixty-five students who had participated in ecological learning activities and school environmental programs. The selection criteria included direct involvement in curriculum planning, implementation, evaluation, environmental education activities, and willingness to participate in the study.

Table 2. Research Participants

Participant Category	Number	Selection Criteria	Research Role
Principal	1	Responsible for school policy	Educational leadership
Vice Principal for Curriculum Affairs	1	Responsible for curriculum management	Curriculum coordination
PAI Teachers	5	Directly involved in curriculum implementation	Instructional practice
Students	65	Participation in ecological learning programs	Learning experiences
Total	72	–	–

Data Collection

a. Interviews

Semi-structured interviews were conducted between March and May 2026 with the principal, vice principal for curriculum affairs, and Islamic Religious Education teachers. Each interview lasted approximately 45–60 minutes and focused on curriculum planning, curriculum implementation, curriculum evaluation, and the integration of ecological tawḥīd values into educational practice. Interviews were audio-recorded with participants' consent and subsequently transcribed for analysis.

b. Observations

Participant observations were conducted from March to June 2026 during classroom instruction, environmental projects, religious activities, and school-based ecological programs. Observation focused on teaching practices, student participation, environmental initiatives, and the incorporation of ecological values into learning activities.

c. Document Analysis

Document analysis included curriculum documents, annual school programs, lesson plans, teaching modules, assessment instruments, environmental activity reports, school regulations, and other institutional documents relevant to curriculum management. These documents were examined to identify evidence of ecological tawḥīd integration within curriculum planning, implementation, and evaluation.

Data were analyzed using thematic analysis. According to Braun and Clarke (2006), thematic analysis is a flexible and systematic method for identifying, analyzing, and interpreting patterns of meaning within qualitative data. The analytical process involved four stages. First, interview transcripts, observation notes, questionnaire summaries, and documentary evidence were organized and prepared for analysis. Second, open coding was conducted to identify recurring concepts and patterns within the data. Third, codes were grouped into broader categories and themes related to curriculum planning, curriculum implementation, curriculum evaluation, ecological tawḥīd values, and religious-ecological awareness. Finally, the themes were interpreted to explain the mechanisms through which ecological tawḥīd values were integrated into curriculum management practices.

d. Student Questionnaire

To complement the qualitative findings, a questionnaire was administered to sixty-five students in June 2026. The questionnaire consisted of fifteen closed-ended items measured using a five-point Likert scale ranging from strongly disagree (1) to strongly agree (5). The questionnaire was used as supporting descriptive evidence to triangulate the qualitative findings and was not intended for inferential statistical analysis.

Trustworthiness of the Findings

To ensure the trustworthiness of the findings, several validation strategies were employed. Credibility was strengthened through methodological triangulation involving interviews, observations, document analysis, and questionnaire data. Triangulation enabled the researcher to compare information obtained from multiple sources and enhance the credibility of the findings (Creswell & Poth, 2018). Member checking was conducted by discussing preliminary interpretations with selected participants to verify the accuracy of the data. Transferability was supported through detailed descriptions of the research context and participants. Dependability and confirmability were enhanced through systematic documentation of data collection procedures, coding processes, and analytical decisions throughout the study, consistent with the criteria proposed by Lincoln and Guba (Lincoln & Guba, 1985).

Ethical Considerations

Participation in the study was voluntary. Prior to data collection, all participants were informed about the objectives and procedures of the research and provided their consent to participate. Participant anonymity and confidentiality were maintained throughout the research process by removing personally identifiable information from interview transcripts, field notes, and research reports. The study adhered to ethical principles governing educational research and ensured that participants could withdraw from the study at any stage without consequence.

C. RESULT AND DISCUSSION

This study aims to analyze how the integration of ecological tawḥīd values is implemented in the management of the Islamic Religious Education (PAI) curriculum. The analysis focuses on three main dimensions of curriculum management: planning, implementation, and evaluation. These three dimensions were chosen because, from an

educational management perspective, the success of internalizing values in the curriculum depends heavily on the integration between the policy planning stage, learning practices, and the evaluation system implemented in educational institutions. Research data were obtained through analysis of curriculum documents, teaching modules, and institutional programs related to the integration of ecological values in PAI learning.

Interview findings revealed that environmental themes were systematically incorporated into annual curriculum planning and school programs. According to the vice principal for curriculum affairs, ecological values were integrated into both classroom learning and extracurricular activities to ensure that environmental responsibility became part of students' daily educational experiences (Interview, April 2026). This finding was further supported by curriculum documents and annual school program reports that explicitly included environmental activities and sustainability-oriented learning objectives.

In general, the research results indicate that the integration of ecological tawḥīd values into curriculum management has begun to be systematically applied in several learning components. This is evident in the existence of learning materials that connect the concept of tawḥīd with ecological responsibility, the integration of kauniyah verses in teaching modules, and the implementation of project-based learning activities related to environmental awareness. Descriptive statistics show that most indicators in each dimension are in the high category, indicating consistency between the institutional vision, curriculum planning, and applied learning practices.

Integration of Ecological Tawḥīd Values in the Dimensions of Curriculum Planning

The first dimension analyzed in this study is the curriculum planning stage. In the context of educational management, the planning stage plays a strategic role because it determines the direction of academic policy and the conceptual framework for learning that will be implemented in the educational process. Document analysis of the curriculum instruments shows that most Islamic Religious Education (PAI) teaching modules have begun to integrate ecological values derived from an Islamic theological perspective.

Based on the analysis of 12 teaching modules used in Islamic Religious Education (PAI) learning at the madrasah level, nine modules (75%) explicitly integrated Kauniyah verses and the theme of ecological responsibility into their learning materials. This integration generally emerged in the form of linking the concept of monotheism with human obligations as caliphs responsible for maintaining the balance of nature. In several modules, discussions of the creation of the universe were not only explained as part of faith in God but also linked to the ethics of environmental management and human moral responsibility for the sustainability of ecosystems.

Furthermore, the integration of ecological values is evident in the structure of the madrasah's annual program. Of the five annual programs analyzed, four (80%) included environmental awareness-based activities, such as school greening programs, environmental cleanup activities, and learning projects related to natural resource conservation. These programs not only function as extracurricular activities but are also integrated with Islamic Religious Education (PAI) learning activities so that students can understand the relationship between religious values and ecological responsibility in a more contextual way.

These findings indicate that, during the curriculum planning stage, a systematic effort has been made to integrate sustainability values into religious learning. Conceptually, this approach reflects a transformation in the Islamic educational paradigm, which no longer separates the theological dimension from the ecological realities facing contemporary society. The integration of kauniyah verses into the teaching modules also reinforces the understanding that nature is part of God's signs of greatness, possessing both spiritual and ethical significance.

Implementation of Ecological Tawḥīd-Based Learning

The second dimension analyzed in this study is learning implementation. At this stage, the analysis focuses on how the values formulated in curriculum planning are translated into classroom learning practices. Learning implementation is a crucial stage in curriculum management because it is at this stage that the values contained in the curriculum document are internalized by students through the pedagogical process.

The research results show that the integration of ecological values into Islamic Religious Education (PAI) learning is carried out through various contextual pedagogical strategies. One approach used is linking monotheism material to natural phenomena that can be directly observed by students. In several learning sessions, teachers invite students to reflect on Quranic verses related to the creation of the universe, such as those describing the heavens, earth, water, and plants. This approach aims to build awareness that nature is part of a cosmic system that reflects God's greatness.

In addition to a reflective approach, the implementation of ecological tawḥīd values is also carried out through project-based learning activities. In these activities, students are given the task of observing the environmental conditions around the school and designing simple activities aimed at improving environmental quality. Examples of these activities include tree planting programs, organic waste management, and environmental awareness campaigns within the madrasah.

Observational data showed that approximately 75% of the analyzed learning sessions integrated ecological themes into classroom discussions. This demonstrates that teachers have a high level of awareness of the importance of connecting religious values with environmental issues relevant to students' lives. Furthermore, questionnaires administered to students also indicated that most students had a

positive perception of learning that integrates environmental themes. Approximately 81% of students stated that Islamic Religious Education (PAI) learning that linked the value of monotheism (Tawhid) with environmental issues helped them better understand the relationship between religion and social responsibility towards nature.

These findings indicate that the implementation of ecological tawḥīd-based learning not only improves students' cognitive understanding of the concept of tawhid but also fosters a stronger ecological awareness. In other words, the integration of ecological values into Islamic Religious Education (PAI) learning has the potential to produce a more transformative educational process, where students not only learn theological concepts theoretically but also understand their practical implications in everyday life.

Interview and document analysis findings indicated that evaluation was conducted through classroom assessments, project-based assignments, student participation records, and reports of environmental activities. Teachers reported that students were encouraged not only to understand ecological concepts but also to demonstrate environmentally responsible behavior in daily school activities. School documents further showed that environmental programs and student participation were regularly reviewed as part of the curriculum evaluation process.

Ecological Awareness-Based Learning Evaluation System

The third dimension analyzed in this study is the learning evaluation system. Evaluation plays a crucial role in curriculum management, measuring the extent to which learning objectives have been achieved and how the values taught have been internalized by students. Therefore, the integration of ecological tawḥīd values into the curriculum must also be reflected in the evaluation instruments used in learning.

The analysis shows that most evaluation instruments used in Islamic Religious Education (PAI) learning have begun to integrate assessment indicators related to environmental attitudes and awareness. Of all the evaluation instruments analyzed, approximately 70% included attitude-based assessment aspects related to environmental concern. This assessment is generally conducted through observations of student behavior during learning activities and written reflections on human responsibility towards nature.

In addition to attitude-based assessments, learning evaluations were also conducted through learning projects related to environmental issues. The analysis showed that the average score for students' projects in environment-based learning activities reached 84.6, which is in the good category. Although numerically this score is higher than several other indicators, the assessment categories used in this study follow the standard classification of educational evaluation, where a score range of 80–89 is categorized as good, while the high category is used for indicators of program implementation percentage. These findings indicate that the learning evaluation system has begun to accommodate the affective and practical dimensions in Islamic Religious

Education (PAI) learning. By incorporating ecological awareness indicators into the evaluation, the learning process not only assesses cognitive mastery of the material but also considers changes in students' attitudes and behaviors toward the environment.

Synthesis of Research Findings

Overall, the research results indicate that the integration of ecological tawhid values into Islamic Religious Education (PAI) curriculum management has shown a positive trend across the three main dimensions analyzed. During the planning stage, most teaching modules integrated kauniyah verses and the theme of ecological responsibility into the structure of the learning materials. During the implementation stage, Islamic Religious Education (PAI) learning began to adopt a pedagogical approach that connects the values of tawhid with ecological phenomena relevant to students' lives. Meanwhile, during the evaluation stage, assessment instruments began to incorporate environmental awareness indicators as part of the learning outcome assessment process.

Observation findings indicated that ecological values were integrated into classroom discussions, environmental campaigns, waste-management activities, and school-based environmental programs. Teachers consistently connected environmental stewardship with Islamic teachings on khalīfah, amanah, and mīzān. These observations demonstrated that ecological tawḥīd was not merely introduced as a conceptual framework but was practiced through daily educational activities and student participation

Descriptively, more than 70% of the indicators in each dimension were categorized as high. This indicates consistency between curriculum policies, learning practices, and the evaluation systems implemented in the educational institutions studied. In other words, the integration of ecological values into the Islamic Religious Education (PAI) curriculum not only emerged at the conceptual level but also began to be implemented in real-life educational practices. These findings indicate that Islamic education has significant potential to contribute to building ecological awareness through the integration of theological values into the curriculum. By linking the concept of monotheism with ecological responsibility, Islamic Religious Education (PAI) learning can serve as a means of value transformation, encouraging students to understand the relationship between faith and responsibility for environmental sustainability.

Table 2. Integration of Ecological Tawḥīd Values in Islamic Religious Education Curriculum Management

Management Dimensions	Integration Strategy	Implementation Indicators	Impact on Students
Planning	Integration of kauniyah verses in CP & teaching modules	Ecological value-based curriculum document	Holistic understanding of monotheism
Implementation	Environmental project-based learning	Green school activities & theological reflection	Spiritual-ecological awareness
Evaluation	Authentic assessment & attitude observation	Religious-ecological character assessment	Pro-environmental behavior

Source: Authors ellaboration

DISCUSSION

The findings of this study confirm that the integration of ecological tawḥīd values into the management of the Islamic Religious Education (PAI) curriculum at the Daarul Falah Carenang Udik Private Madrasah Aliyah (Madrasah Aliyah Swasta) not only represents pedagogical innovation but also demonstrates a systemic managerial transformation in educational management. This integration is not only evident in the learning content but is also reflected in the structure of curriculum policies, learning practices, and evaluation systems that are interconnected in building a religious-ecological school culture. Thus, the curriculum is no longer understood as a static academic document, but as a strategic instrument that shapes the value orientation and educational practices within the institution. From an educational management perspective, these findings strengthen the argument that effective curriculum change must begin at the leadership and management level of educational institutions, because managerial decisions determine the direction of implementation of learning innovations at the classroom level (Hallinger, 2018).

In the context of Islamic education, the integration of ecological values through the tawḥīd paradigm has significant epistemological implications. Tawḥīd in the Islamic tradition not only affirms the oneness of God as a theological principle but also reflects the cosmic unity of all creation within the divine order. Therefore, the relationship between humans and nature, from a tawḥīd perspective, is ethical and spiritual, not merely an instrumental relationship oriented towards resource exploitation. This perspective aligns with Islamic ecotheology studies, which assert that the modern environmental crisis is closely related to a spiritual crisis that separates humans from an awareness of the sanctity of nature as part of God's creation (Gade, 2019a). Thus, the integration of ecological tawḥīd into the Islamic Religious Education curriculum can be

understood as an effort to reconstruct the epistemology of Islamic education that connects the theological dimension with human ecological responsibility in social life.

The epistemological implications identified in this study should be understood at the level of educational philosophy rather than at the level of curriculum content alone. While the empirical focus of the study is the management of the PAI curriculum, the discussion of Islamic educational epistemology concerns broader questions regarding the relationship between revelation, ethics, knowledge, and environmental responsibility within Islamic education.

The findings are also consistent with recent discussions on sustainability education that emphasize the integration of ethical, cultural, and spiritual dimensions into curriculum development (Bianchi et al., 2022; UNESCO, 2021). Recent scholarship in Islamic education similarly highlights the growing importance of connecting ecological responsibility with religious learning to address contemporary environmental challenges (Abdullah, 2022; Sahin, 2023).

In terms of curriculum planning, the study results show that 9 of 12 teaching modules (75%) explicitly integrate kauniyah verses and themes of ecological responsibility. Furthermore, 4 of 5 madrasah annual programs (80%) include an environmental awareness agenda. Descriptively, these figures are high and indicate consistency between curriculum policy and the madrasah's institutional vision. This integration demonstrates that sustainability values have been systematically considered in curriculum planning, not simply as additional learning materials.

The findings of this study extend previous discussions on Islamic environmental education by demonstrating how ecological tawḥīd can function not only as a theological concept but also as an operational framework for curriculum management. While previous studies have emphasized Islamic environmental ethics and ecological awareness, the present study shows that ecological tawḥīd can be systematically integrated into curriculum planning, implementation, and evaluation. This integration contributes to the development of students' religious-ecological awareness by connecting spiritual values with practical environmental responsibility.

These findings align with the Education for Sustainable Development (ESD) paradigm, which emphasizes the importance of integrating sustainability values into formal curriculum structures and educational policies (Leicht et al., 2018). The ESD approach positions education as an instrument of social transformation capable of building ecological awareness among the younger generation. Other research also shows that integrating sustainability values into the curriculum and teacher education significantly impacts the effectiveness of implementing values-based learning (Bourn & Hunt, 2020). In the madrasah context, monotheism serves as an ontological foundation that connects theological dimensions with ecological responsibility, thus eliminating the fragmented nature of the curriculum between spiritual and social aspects.

The distribution of the integration of Kauniyah verses in Islamic Religious Education (PAI) teaching modules also shows that environmental themes have become

part of various learning topics, such as monotheism, morals, interpretation, and environmental jurisprudence. This demonstrates that an integrative approach in the curriculum allows for the integration of theological and scientific perspectives in understanding natural phenomena. Such integration is crucial because effective environmental education requires not only ecological knowledge but also an ethical foundation capable of shaping students' moral orientation toward nature (Tilbury, 2017).

In the learning implementation phase, observations of eight learning sessions showed that six sessions (75%) implemented a contextual-ecological approach through discussions of Kauniyah verses, environmental-based projects (green school projects), and critical reflection on the global environmental crisis. This learning approach emphasizes active student involvement in understanding the relationship between religious values and ecological responsibility.

The questionnaire findings presented in this section serve as supplementary descriptive evidence intended to support and triangulate the qualitative findings obtained through interviews, observations, and document analysis. The questionnaire was not employed for statistical generalization but rather to provide additional insights into students' perceptions regarding the integration of ecological tawḥīd values and environmental responsibility. Questionnaire data from 100 students showed that 81% of students stated that the learning helped them understand the relationship between monotheism and environmental responsibility, while 78% reported increased **pro-environmental awareness and positive behavioral orientation toward environmental responsibility**. The average score for students' perceptions of the relevance of the learning reached 4.2 on a scale of 1–5, which is in the high category.

These findings suggest an association between the integration of religious values into learning and students' ecological awareness. These results support research showing that experiential and values-based environmental education can enhance students' emotional connection to nature and influence pro-environmental behavior (Otto & Pensini, 2017). When students not only learn environmental concepts theoretically but also connect them with spiritual values and direct experiences, they tend to develop a more responsible attitude toward nature.

From an educational management perspective, the successful implementation of this curriculum innovation is also inseparable from the role of the instructional leadership of the madrasah principal. Instructional leadership plays a crucial role in creating an institutional environment that supports learning innovation and encourages teachers to develop creative and contextual learning strategies. Research in the field of educational leadership shows that instructional leadership has a significant influence on the effectiveness of curriculum implementation and improves the quality of learning (Liu & Hallinger, 2018). In the context of this research, the support of madrasah leadership is evident in school policies that encourage the integration of environmental

education and in providing space for teachers to develop project-based learning methods and ecological reflection.

In the learning evaluation dimension, the study found that approximately 70% of assessment instruments included indicators of religious-ecological attitudes in addition to cognitive assessments. The average score for students' environmental projects reached 84.6 (good category), while the observation score for religious-ecological attitudes was 3.9 on a scale of 5. These findings indicate that learning evaluation is no longer limited to conceptual mastery but also reflects efforts to measure the internalization of values in students' actual behavior.

This evaluation approach aligns with the sustainability competency framework, which emphasizes the importance of authentic assessment in sustainability education. Within this framework, evaluation measures not only cognitive aspects but also affective and behavioral dimensions related to ecological responsibility (Bianchi et al., 2022). Project-based assessment and attitude observations allow teachers to assess the extent to which students have internalized the values taught in their lessons in their daily lives.

Overall, more than 70% of indicators in each dimension of curriculum management scored high. This demonstrates managerial consistency between curriculum policies, learning practices, and the evaluation system implemented in madrasas. This consistency is a crucial factor in the successful internalization of values in education, as value transformation cannot occur effectively if institutional policies, pedagogical practices, and evaluation systems operate separately.

From an Islamic education management perspective, the integration model found in this study demonstrates that the curriculum can be an instrument of value transformation when designed systematically and supported by visionary institutional leadership. The integration of religious and sustainable values, as seen in madrasah practices, strengthens the argument that Islamic education has strategic potential in responding to the global environmental crisis through a values-based approach and effective institutional management (Bourn, 2020).

Thus, the practice of integrating ecological tawḥīd into the Islamic Religious Education curriculum at madrasas can be positioned as a prototype for developing an Islamic education curriculum that is more responsive to the ecological challenges of the 21st century. This model demonstrates that religious education is not only relevant in developing spiritual piety but also plays a crucial role in shaping sustainable ecological awareness. In the context of the increasingly complex global environmental crisis, an integrative approach between theology, education, and sustainability is becoming increasingly important to develop in the future Islamic education system.

Table 3.
The following summarizes the main statistics of the integration of ecological tawḥīd values in curriculum management:

Dimensions	Indicator	Statistical Results	Category
Planning	Integrated teaching module	75%	High
Planning	Relevant annual programs	80%	High
Implementation	Ecological learning session	75%	High
Implementation	Positive student perception	81%	High
Evaluation	Attitude-based instruments	70%	High
Evaluation	Average project	84,6	Good

Source: Authors ellaboration

Overall, more than 70% of indicators in each dimension scored high, indicating managerial consistency between policies, learning practices, and evaluation systems. The synthesis of these findings suggests a conceptual contribution to discussions on Islamic educational epistemology by illustrating how ecological tawḥīd can be operationalized within curriculum management and educational practice. Tawhid is no longer understood merely as a metaphysical doctrine, but as an ethical principle that shapes human relations with nature and their social environment.

From an Islamic education management perspective, this model demonstrates that the curriculum can be an instrument of value transformation when designed systematically and supported by visionary leadership. The integration of religious and sustainability values, as found in this study, strengthens the argument that Islamic education has strategic potential in responding to the global environmental crisis through a values-based approach and institutional management (Bourn et al., 2020). Thus, the practice at this madrasah can be positioned as a prototype for integrating ecotheology into the Islamic Religious Education curriculum, relevant to the challenges of the 21st century.

CONCLUSION

This study suggests that the integration of ecological *tawḥīd* values into curriculum management can provide a meaningful framework for connecting Islamic teachings with environmental education in Islamic schools. The findings indicate that the principles of *khalīfah*, *amanah*, and *mīzān* were incorporated into curriculum planning, implementation, and evaluation, thereby supporting the integration of religious and environmental values within educational practice.

The study further indicates that the incorporation of ecological *tawḥīd* values may contribute to the development of students' religious-ecological awareness by encouraging them to understand environmental responsibility as part of their religious

commitment. Interview, observation, document analysis, and questionnaire findings consistently suggest that environmental stewardship was perceived as an important component of Islamic education and school culture.

From a theoretical perspective, the study contributes to the growing discussion on Islamic environmental education by illustrating how ecological *tawḥīd* can function as a conceptual framework for curriculum management. Rather than positioning environmental responsibility solely as a practical or technical concern, the findings suggest that ecological values can be integrated with spiritual and ethical dimensions of education to support holistic student development.

Nevertheless, the findings should be interpreted in light of several limitations. First, this study was conducted as a single-site qualitative case study in one Islamic educational institution, which limits the transferability of the findings to other educational contexts. Second, participants were selected through purposive sampling, focusing on individuals directly involved in curriculum management and ecological learning activities. Third, the study relied partly on a self-reported student questionnaire and descriptive percentages as supplementary evidence, which may be influenced by subjective perceptions and social desirability. Furthermore, the research did not employ pre-test and post-test measures to assess changes in students' environmental awareness over time, and classroom observations were conducted within a limited number of observation sessions. Consequently, the findings should not be interpreted as evidence of causal relationships but rather as contextual insights into the implementation of ecological tawḥīd within Islamic educational practice. Future research may involve multiple institutions, comparative case studies, longitudinal approaches, or mixed-methods designs to further examine the relationship between Islamic values, curriculum management, and environmental education.

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