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THE ROLE OF MADRASAH PRINCIPAL INSTRUCTIONAL LEADERSHIP IN THE DEVELOPMENT OF ECOTHEOLOGY-BASED PAI TEACHING MATERIALS

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Kata Kunci:	ABSTRAK
Epistemologi Ekoteologi; Pendidikan Agama Islam; Relasi Tuhan- manusia-alam; Etika Lingkungan; Rekonstruksi paradigma.	Penelitian ini mengkaji peran kepemimpinan instruksional kepala madrasah dalam pengembangan bahan ajar Pendidikan Agama Islam (PAI) berbasis ekoteologi. Kajian ini dilatarbelakangi oleh meningkatnya urgensi krisis ekologis serta kebutuhan pendidikan Islam untuk merespons persoalan lingkungan tidak hanya secara normatif, tetapi juga secara transformatif melalui proses pembelajaran. Di banyak madrasah, bahan ajar PAI masih cenderung berfokus pada dimensi ritual dan doktrinal, sementara nilai-nilai ekologis yang berakar pada teologi Islam belum terintegrasi secara sistematis dalam sumber belajar. Penelitian ini menggunakan pendekatan kualitatif berbasis studi kepustakaan melalui analisis konseptual dan telaah literatur yang berkaitan dengan kepemimpinan instruksional, ekoteologi, pendidikan Islam, dan pengembangan kurikulum. Hasil kajian menunjukkan bahwa kepemimpinan instruksional kepala madrasah memiliki peran strategis dalam mengarahkan orientasi kurikulum, memperkuat kompetensi pedagogis guru, memfasilitasi pengembangan bahan ajar secara kolaboratif, serta membangun budaya akademik ekologis di lingkungan madrasah.

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Keywords:	ABSTRACTS
Ecotheological Epistemology; Islamic Religious Education; God– Human–Nature Relations; Environmental Ethics; Paradigm Reconstruction.	This study examines the role of madrasah principal instructional leadership in the development of ecotheology-based Islamic Religious Education (PAI) teaching materials. The study is grounded in the increasing urgency of ecological crises and the need for Islamic education to respond not only normatively but also transformatively toward environmental sustainability. In many madrasahs, PAI teaching materials remain focused on ritualistic and doctrinal dimensions, while ecological values rooted in Islamic theology have not been systematically integrated into learning resources. This research employs a qualitative library research approach through conceptual analysis and literature review related to instructional leadership, ecotheology, Islamic education, and curriculum development. The findings indicate that instructional leadership plays a strategic role in directing curriculum orientation, strengthening teacher pedagogical competence, facilitating collaborative material development, and creating an ecological academic culture in madrasahs.

A. INTRODUCTION

The current global ecological crisis has developed into a multidimensional problem that affects not only the environment, but also the social, economic, and spiritual dimensions of human life. Climate change, marked by rising global average temperatures, the increasing frequency of hydrometeorological disasters, food and water crises, and the loss of biodiversity, indicates a serious disorientation in the relationship between humans and nature. The report of the Intergovernmental Panel on Climate Change confirms that anthropogenic activities are the dominant cause of accelerated global warming and the imbalance of the Earth system IPCC (2023). This fact suggests that the ecological crisis is not merely the result of technical errors in resource management, but is rooted more deeply in the paradigm of knowledge and in the way humans perceive nature.

From a philosophical perspective, environmental degradation is often associated with the dominance of the modern anthropocentric paradigm, which places humans at the center of reality and positions nature as an object of exploitation. The desacralization of nature in modern civilization has led to the loss of cosmological and spiritual awareness of the environment. Nasr (2023) describes the ecological crisis as a manifestation of the spiritual crisis of modernity, namely the severing of the sacred relationship between humans and the cosmos. In Muslim societies, this issue becomes paradoxical because Islamic teachings normatively affirm human beings as *khalifah* who are responsible for maintaining balance, or *mizan*, and preventing corruption, or *fasad*, on Earth. The tension between normative teachings and ecological reality indicates an epistemological problem in the internalization of these teachings.

Islamic Religious Education, commonly referred to as PAI, plays a central role in shaping students' worldview and moral awareness. PAI does not merely function as a transmission of doctrine, but also as a process of worldview formation that determines the relationship between humans, God, fellow human beings, and nature. However, the practice of PAI in various educational institutions still tends to be normative-ritualistic and oriented toward individual piety. The ecological dimension within the structure of Islamic teachings has not yet been systematically integrated into the epistemological framework of education. Nature is often understood merely as the background of life or

as an object of science, rather than as a theological entity that carries spiritual and moral meaning within the structure of faith.

From Umar's perspective (2019), Islamic teachings position humans as *khalifah* who bear a cosmic mandate to preserve the balance and harmony of the universe. Therefore, the relationship between God, humans, and nature is integral and inseparable. Umar further emphasizes that *tawhid* does not only have a theological-vertical dimension, but also social and ecological dimensions. Environmental destruction, in this sense, reflects a spiritual failure of human beings to understand the mandate of *khalifah* (Umar, 2014). Thus, strengthening a holistic perspective of *tawhid* becomes an important foundation for reconstructing the epistemology of PAI, so that it does not remain trapped in symbolic piety, but instead gives rise to ethical and ecological awareness as an authentic manifestation of faith. This condition requires a reconstruction of the epistemology of PAI so that the relationship between God, humans, and nature can be understood integrally.

In the context of madrasah education, the effort to reconstruct this paradigm cannot be separated from the leadership role of the madrasah principal, particularly in the dimension of instructional leadership. The madrasah principal does not only function as an educational administrator, but also as an academic leader who determines the direction of curriculum development, learning culture, and teaching material innovation. Instructional leadership places the quality of learning as the main orientation of leadership. Therefore, the madrasah principal has a strategic responsibility to encourage the integration of ecotheological values into PAI teaching materials. Through academic supervision, teacher mentoring, the strengthening of ecological literacy culture, and the development of contextual learning policies, the madrasah principal can build an educational environment that is responsive to contemporary ecological crises.

The development of ecotheology-based PAI teaching materials is important because teaching materials do not merely serve as media for transferring knowledge, but also as instruments for shaping students' awareness and character. Teaching materials that integrate the concepts of *tawhid*, *khalifah*, *amanah*, and environmental ethics enable students to understand that protecting the sustainability of nature is an integral part of implementing Islamic values. However, such integration requires institutional support and visionary leadership so that it does not stop at the normative level. In this regard, the instructional leadership of the madrasah principal serves as a driving force for transforming PAI learning toward a more ethical-transformative, contextual, and environmentally sustainable paradigm.

Over the past three years, studies on Islam and ecology have developed significantly. Nasr (2023) highlights the spiritual crisis as the root of modern ecological problems and emphasizes that environmental degradation cannot be separated from the crisis of meaning within modern civilization. Rahman (2023) proposes a reorientation of Islamic theology toward a cosmocentric paradigm as a response to the dominance of anthropocentrism in religious practice. Abdelzaher and Salem (2024) examine the integration of Islamic environmental ethics into sustainability education and show the contribution of spiritual values to the formation of ecological behavior. Huda and Prasetyo (2025) discuss the design of a sustainability-based PAI curriculum as a response to climate change and global challenges. These four studies enrich the

discourse on ecotheology in Islamic education, yet they have not explicitly examined the epistemological structure underlying such integration.

The research gap of this study lies in the absence of a formulation of ecotheological epistemology within the framework of Islamic Religious Education. Most existing studies remain normative, applicative, or policy-oriented, and have not yet addressed the reconstruction of a knowledge paradigm that conceptually and systematically integrates the relationship between God, human beings, and nature. Without epistemological reconstruction, the integration of ecological values into PAI risks becoming merely a curricular addition that does not transform students' fundamental worldview regarding cosmic relations and ecological responsibility.

The novelty of this study lies in its attempt to reconstruct ecotheological epistemology in PAI through a relational paradigm of God, human beings, and nature. This paradigm positions God as the ontological center, human beings as moral-epistemic subjects, and nature as a theological entity that possesses intrinsic meaning within the structure of faith. This approach goes beyond the thematic integration of environmental materials and moves toward a shift in the paradigm of thinking in PAI, from an anthropocentric orientation toward a *tawhid*-based relational-ecocentric paradigm.

Theoretically, this study enriches the development of the philosophy of Islamic Religious Education by offering a systematic and argumentative construction of ecotheological epistemology. Practically, this framework can serve as a foundation for curriculum development, learning design, and Islamic education policies that are more responsive to ecological crises. In addition, this study opens space for interdisciplinary dialogue among Islamic theology, philosophy of education, and environmental studies in responding to the challenges of contemporary civilization in an integrative manner.

Thus, the reconstruction of ecotheological epistemology is not only an academic necessity, but also a civilizational one. Islamic Religious Education needs to move from a normative approach toward a transformative paradigm that builds cosmological awareness and ecological responsibility as integral parts of faith.

1. Ecological Theology (Ecotheology) in Islam

Ecotheology is a theological reflection that examines the relationship between religious belief and ecological responsibility. In the Islamic tradition, the foundation of ecotheology rests on the concepts of *tawhid*, *khalifah*, *amanah*, and *mizan*. *Tawhid*, as the principle of divine unity, does not only carry a theological-dogmatic meaning, but also a cosmological one, namely the unity of all creation within a harmonious divine order. Nature is understood as *ayat kauniyah*, or cosmic signs, that reflect the greatness of God. Therefore, destroying nature means denying the sacred value of creation. In Umar's thought (2014), *tawhid* must be understood functionally and contextually. Authentic awareness of God gives rise to social and ecological responsibility because all reality exists within the network of divine unity. Thus, ecological destruction is not merely a technical problem, but also a spiritual crisis caused by the reduction of *tawhid* into a purely ritual doctrine.

The concept of *khalifah* affirms the position of human beings as God's representatives who are responsible for managing the Earth. *Amanah* contains a moral dimension, indicating that this responsibility must be carried out justly and proportionally, while *mizan* emphasizes ecological balance as a cosmic principle. Umar

(2019) asserts that the mandate of *khalifah* is not a legitimization of domination, but an ethical call to preserve the harmony of creation as part of social worship. From this perspective, the relationship between humans and nature is ethical-theological rather than exploitative. Rahman (2023) emphasizes the need to shift the paradigm of Islamic theology from anthropocentrism toward cosmocentrism, so that religion can respond to ecological crises in a substantive way. This view is in line with Umar's idea (2014) that Islamic spirituality must move from symbolic piety toward transformative piety that has an impact on ecological justice.

Nevertheless, most studies on Islamic ecotheology still focus on the dimensions of normative ethics and social advocacy. This discourse has not yet entered deeply into the realm of educational epistemology, particularly in relation to how these theological concepts are constructed as a structure of knowledge that shapes students' awareness within the PAI system. Within this framework, Umar (2019) emphasizes the importance of an integrative reading of revealed texts and social reality as a form of actualizing Islam that is living and responsive.

2. Madrasah Principal's Instructional Leadership

Instructional leadership is an educational leadership model that places the improvement of learning quality at the center of school leadership. In the context of madrasahs, instructional leadership includes the madrasah principal's ability to direct the academic vision, supervise learning practices, support teachers' professional development, and ensure that the curriculum is implemented effectively. Hallinger (2022) emphasizes that instructional leadership has a significant influence on learning effectiveness, pedagogical innovation, and the improvement of academic quality in educational institutions. Similarly, Bush (2023) explains that effective instructional leadership can create a school culture that is collaborative, reflective, and oriented toward the continuous improvement of learning quality.

In the context of Islamic education, the madrasah principal does not merely serve as an educational administrator, but also as an academic and moral leader who is responsible for building a learning culture that integrates Islamic values with the contextual needs of society. Wiyono and Suryani (2024) assert that visionary madrasah principal leadership contributes to curriculum innovation, the strengthening of teacher professionalism, and the development of value-based learning. Therefore, the instructional leadership of the madrasah principal becomes a strategic factor in encouraging the transformation of Islamic Religious Education (PAI) learning so that it can respond to contemporary issues, including the global ecological crisis.

3. Ecotheology in the Development of PAI Teaching Materials

Islamic ecotheology is a theological approach that positions the relationship between humans and nature as an integral part of religious responsibility. The concepts of *tawhid*, *khalifah*, *amanah*, and *mizan* serve as the main foundations for developing ecological ethics in Islamic education. From Nasr's perspective (2023), the modern ecological crisis is, in fact, a reflection of the human spiritual crisis caused by the rupture of the sacred relationship between humans and nature. Therefore, the reconstruction of ecological awareness in Islamic education needs to be carried out through a theological approach that places nature as part of the divine signs, or *ayat kauniyah*.

The development of ecotheology-based PAI teaching materials enables the integration of environmental sustainability values into religious learning in a more

contextual and transformative way. Rahman (2022) explains that the paradigm of Islamic theology needs to shift from an anthropocentric orientation toward a cosmocentric one, so that religion can offer a substantive response to contemporary environmental problems. In addition, Abdelzaher and Salem (2024) show that the integration of Islamic environmental ethics into education significantly contributes to the formation of students' ecological behavior. In the context of the PAI curriculum, Huda and Prasetyo (2025) also emphasize the importance of developing sustainability-based teaching materials to build religious awareness that is ecological and responsive to global climate change.

4. Epistemology of Islamic Religious Education

The epistemology of Islamic Religious Education (PAI) discusses the sources, structure, and validity of Islamic knowledge taught in the educational process. The main sources of Islamic epistemology are revelation, namely the Qur'an and hadith, reason, and empirical experience, all of which are integrated within the Islamic intellectual tradition. However, in the practice of formal education, the integration between revelation and empirical reality is often fragmented. Religious knowledge is separated from contemporary ecological realities, so students do not clearly see the direct relationship between faith and environmental responsibility.

From Umar's perspective (2014), the dichotomy between religious knowledge and socio-empirical reality is an epistemological legacy that needs to be reconstructed. He emphasizes that revelation did not descend in a vacuum, but has always engaged in dialogue with historical contexts and human realities. Therefore, the integration of *ayat qauliyah* and *ayat kauniyah* is not merely a methodological approach, but a theological consequence of *tawhid* itself.

The reconstruction of ecotheological epistemology means building a framework of knowledge that positions nature as an integral part of the structure of faith. This approach integrates *ayat qauliyah* and *ayat kauniyah* into the learning process, so that reflection on natural phenomena becomes part of theological awareness. Thus, ecological awareness is not merely the result of delivering additional material, but a logical consequence of a comprehensive understanding of *tawhid*. As Umar (2019) affirms, authentic faith must be actualized through social and cosmic responsibility.

B. METHOD

This study employs a qualitative approach with a library research design grounded in critical-philosophical analysis. This approach was selected because the focus of the study lies in reconstructing ecotheological epistemology within Islamic Religious Education (PAI), making conceptual and reflective analysis more relevant than an empirical approach. Library research enables an in-depth exploration of theological ideas, the philosophy of Islamic education, and contemporary literature on the ecological crisis (Zed, 2018). In the context of epistemological inquiry, a philosophical approach is used to analyze the ontological, epistemological, and axiological foundations of the God-human-nature relationship within the framework of PAI (Creswell & Poth, 2018).

The data sources of this study consist of primary and secondary literature. Primary literature includes works on Islamic ecotheology, the philosophy of Islamic education, and recent scholarly articles discussing the relationship between Islam and

the environment, such as studies on the spiritual crisis of modernity (Nasr, 2023), the cosmocentric paradigm in Islamic theology (F. Rahman, 2023), and the integration of sustainability values into Islamic education (Abdelzaher, D., & Salem, 2024; Huda, M., & Prasetyo, 2025). Scientific reports on climate change from the IPCC (2023) are also used to strengthen the factual basis of the global ecological problem. Secondary literature includes books and academic articles relevant to educational epistemology and environmental theory.

Data were collected through documentation techniques by tracing, identifying, and classifying literature based on thematic relevance. This process involved searching for articles in academic databases such as Google Scholar and reputable journals. The selected literature was then categorized into three main focuses: (1) theories of Islamic ecotheology, (2) the epistemology of Islamic Religious Education, and (3) transformational education based on ecological awareness.

Data analysis was conducted through the stages of reduction, thematic analysis, and conceptual synthesis. The reduction stage involved selecting literature directly related to the focus of the study. Thematic analysis was then used to identify key concepts such as ecological *tawhid*, *khalifah*, *amanah*, *mizan*, cosmocentrism, and the integration of *ayat qauliyah* and *ayat kauniyah*. This study also employed content analysis to systematically understand the conceptual meanings contained in the texts (Krippendorff, 2018). This was then combined with critical analysis to examine the epistemological assumptions of the PAI paradigm, which tends to be anthropocentric.

The final stage involved epistemological reconstruction through reflective-dialectical synthesis, bringing classical Islamic theological ideas into dialogue with contemporary ecological challenges. Through this process, the relational paradigm of God, human beings, and nature was formulated as the basis of ecotheological epistemology in PAI. The trustworthiness of the data was maintained through source triangulation and critical evaluation of the literature used (Snyder, 2019), ensuring that the argument developed in this study possesses logical consistency and academic validity.

C. RESULT AND DISCUSSION

1. Transformational Islamic Education and Ecological Awareness

Transformational education theory emphasizes a shift in thinking paradigms as the core of the educational process. Transformation is not only cognitive, but also affective and practical. In the context of PAI, transformation means shifting students' perspectives from an instrumental relationship with nature toward a spiritual-ethical relationship. Abdelzaher and Salem (2024) show that the integration of Islamic spiritual values into sustainability education significantly contributes to the formation of ecological behavior. Similarly, Huda and Prasetyo (2025) emphasize the importance of a sustainability-based PAI curriculum as a response to climate change.

In line with this transformational approach, Umar (2014) asserts that Islamic education must move beyond the transmission of normative knowledge toward the formation of contextual critical and ethical awareness. Spiritual transformation, according to him, is reflected in a change in the way humans view reality, including nature, as part of the divine mandate. Thus, education does not only shape individuals who are personally pious, but also moral agents who preserve cosmic balance.

Although these studies are relevant, they remain largely within the domains of curriculum implementation and value integration. There has not yet been a conceptual formulation that systematically constructs ecotheological epistemology as the philosophical foundation of PAI. This gap becomes the point of departure for the present study.

2. Instructional Leadership and the Transformation of PAI Learning

This study indicates that the madrasah principal's instructional leadership plays a significant role in the development of ecotheology-based Islamic Religious Education (PAI) teaching materials. So far, PAI learning practices in many madrasahs have tended to be oriented toward a normative-textual approach that places the relationship between humans and God within the framework of ritual worship and individual morality. As a result, the ecological dimension of Islamic teachings has not been optimally integrated into teaching materials or learning practices. Through visionary instructional leadership, madrasah principals can guide the transformation of PAI learning toward a more integrative, contextual, and responsive paradigm in addressing the global ecological crisis.

The analysis shows that madrasah principals play a strategic role in directing the development of curricula and teaching materials that integrate ecotheological values such as *tawhid*, *khalifah*, *amanah*, and the prohibition of *fasad fi al-ardh*. In this context, *tawhid* is not only understood as a metaphysical doctrine of the oneness of God, but also as a principle of cosmic unity that affirms the interconnectedness of human beings with all creation. Through instructional leadership, madrasah principals are able to encourage PAI teachers to develop teaching materials that are not merely doctrinal, but also reflective of contemporary environmental problems. This finding is in line with Azra (2023), who emphasizes the importance of integrating Islamic spirituality and socio-ecological responsibility in contemporary Islamic education.

Table 1. Instructional Leadership Roles in Developing Ecotheology-Based PAI Teaching Materials

Dimension of Instructional Leadership	Role of the Madrasah Principal	Implication for Ecotheology-Based PAI Teaching Materials
Curriculum Direction	Directs the orientation of PAI learning toward ecological and theological integration	PAI materials include environmental themes rooted in Islamic concepts such as <i>tawhid</i> , <i>khalifah</i> , <i>amanah</i> , <i>mizan</i> , and <i>fasad fi al-ardh</i>
Academic Supervision	Guides teachers in designing contextual and reflective learning practices	Teachers connect Qur'anic verses with contemporary ecological issues such as climate change, pollution, and resource exploitation
Teacher Professional Development	Facilitates teacher training, academic discussions, and ecological literacy development	Teachers gain stronger pedagogical and ecological competence in developing PAI materials

Collaborative Material Development	Encourages collaboration among PAI teachers and other relevant subject teachers	Teaching materials become more interdisciplinary, integrative, and responsive to environmental challenges
Ecological Academic Culture	Builds school policies and habits that support environmental awareness	Ecotheological values are practiced in the madrasah environment, not merely stated in curriculum documents

Source: Author's conceptual synthesis, 2026.

3. Ecotheological Values in the Development of PAI Teaching Materials

In learning practice, the instructional leadership of madrasah principals is reflected in academic supervision and professional mentoring for teachers in developing ecotheology-based teaching materials. Madrasah principals do not merely ensure the achievement of the formal curriculum, but also guide teachers to design learning that reflects the principles of transformative learning. Teachers are encouraged to connect Qur'anic verses concerning the environment with the ecological realities faced by students. For example, in learning Q. al-Rum [30]: 41, which discusses corruption on land and sea caused by human actions, students can be invited to critically reflect on issues such as climate change, environmental pollution, and the exploitation of natural resources. This approach builds awareness that ecological problems are not only scientific in nature, but also have theological and moral dimensions.

The development of ecotheology-based PAI teaching materials also challenges the dichotomy between the sacred and the profane, which has long separated matters of worship from environmental issues. From a *tawhidic* perspective, all reality is understood as a manifestation of God's signs, or *ayat kauniyah*. Therefore, destroying nature means neglecting the spiritual dimension of creation. Through transformative instructional leadership, madrasah principals can encourage PAI learning that not only shapes students' religious identity, but also builds cosmic responsibility toward the environment.

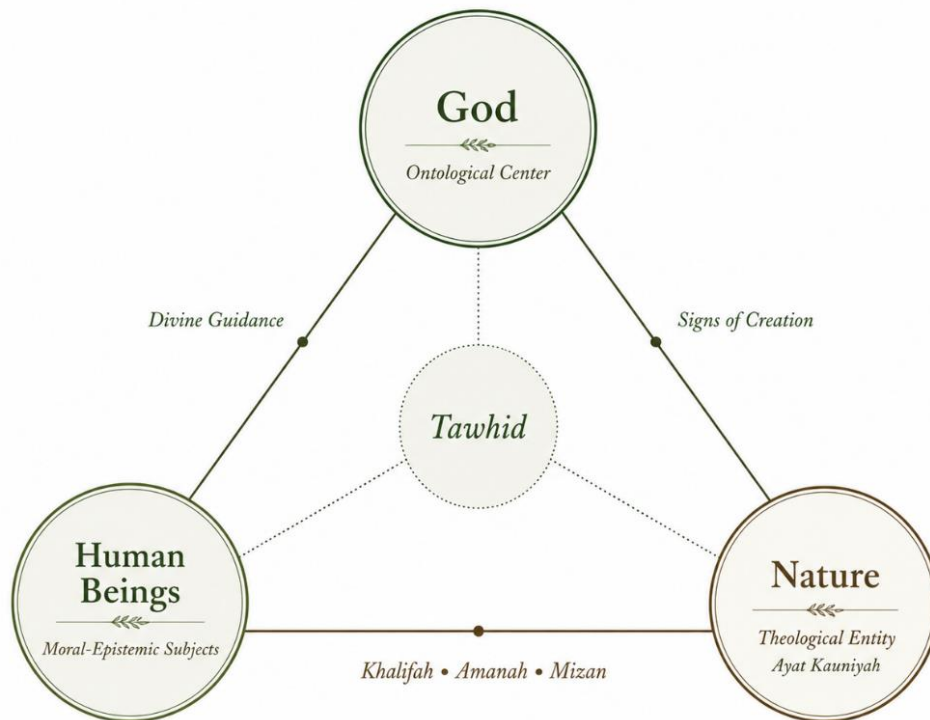


Figure 1. The relational paradigm of God, human beings, and nature in Islamic ecotheology

4. Building Ecological Piety through Contextual Islamic Education

This study also argues that the instructional leadership of madrasah principals can contribute to a shift in students' religious orientation through the development of contextual teaching materials. Students' piety should no longer be understood exclusively in ritualistic terms, but may also be developed into ecological piety. Conceptually, ecotheology-based teaching materials can foster students' concern for the school environment, such as maintaining cleanliness, reducing plastic waste, and participating in madrasah greening programs. This indicates that ecotheology-based teaching materials, when supported by the academic leadership of madrasah principals, can bridge the gap between normative Islamic teachings and students' socio-ecological praxis.

In addition, the findings show that the instructional leadership of madrasah principals also strengthens the dimension of religious moderation through the development of learning based on balance (*tawazun*) and justice (*i'tidal*). When humans are understood as *khalifah* who are responsible for preserving the balance of nature, an awareness emerges that environmental exploitation is contrary to the principle of justice in Islam. This approach is in line with the policy of strengthening religious moderation developed by the Ministry of Religious Affairs of the Republic of Indonesia (2023), which emphasizes the balance between religious commitment and social responsibility.

The findings of this study also strengthen UNESCO's argument (2024), which states that sustainable education must integrate ethical dimensions, spirituality, and ecological responsibility in order to shape generations that are resilient to climate change. In this context, the instructional leadership of madrasah principals becomes a

key element in ensuring that sustainability values are not only present in curriculum documents, but are also concretely implemented in PAI teaching materials and learning practices.

5. Institutional, Epistemological, and Cultural Challenges

Another finding indicates that the success of developing ecotheology-based PAI teaching materials greatly depends on teacher capacity and institutional support established by the madrasah principal. Madrasah principals who have an ecological vision tend to be more active in facilitating teacher training, academic discussion forums, and collaborative development of environment-based teaching materials. Conversely, when madrasah leadership remains administratively oriented and pays little attention to learning innovation, the integration of ecotheological values becomes less optimal. Therefore, instructional leadership is an important factor in creating an academic culture that supports the transformation of PAI learning.

Overall, the findings of this study affirm that the development of ecotheology-based PAI teaching materials cannot be separated from the strategic role of the madrasah principal as a learning leader. The madrasah principal does not merely function as the manager of an educational institution, but also as an agent of academic transformation who is able to build religious-ecological awareness within the madrasah environment. Through learning policies, academic supervision, and the strengthening of teacher professionalism, madrasah principals can encourage the emergence of PAI learning that is more contextual, integrative, and oriented toward environmental sustainability.

In the Indonesian context, which is vulnerable to ecological disasters, the development of ecotheology-based PAI teaching materials has strong social significance. Data from the Ministry of Environment and Forestry of the Republic of Indonesia (2023) show an increase in environmental degradation that affects people's quality of life. Therefore, madrasah principals need to take a more active role in developing academic policies that support the integration of ecological values into PAI learning, so that Islamic education remains relevant to the challenges of the times.

Nevertheless, this study also identifies structural and cultural challenges in the implementation of ecotheology-based teaching materials. Structurally, the national curriculum has not yet fully provided explicit space for the integration of ecological education into PAI. Culturally, some communities still view environmental issues as secular matters that are separate from religion. These challenges require madrasah principals to act not only as educational administrators, but also as intellectual and moral leaders who are capable of building an integrative and transformative learning paradigm.

Thus, the findings of this study affirm that the madrasah principal's instructional leadership is an important foundation for the development of ecotheology-based PAI teaching materials. Visionary, collaborative, and transformative leadership can bring forth PAI learning that not only strengthens students' spiritual dimension, but also builds ecological awareness as an integral part of the implementation of Islamic values.

D. CONCLUSION

The development of ecotheology-based Islamic Religious Education (PAI) teaching materials through the instructional leadership of madrasah principals is a

strategic step in responding to an ecological crisis that is increasingly complex and multidimensional. This study affirms that the relationship between God, human beings, and nature cannot be understood separately or hierarchically, but rather as a systemic unity interconnected within the framework of *tawhid*. This paradigm positions human beings not as the center of cosmic exploitation, but as *khalifah* who carry a divine mandate to preserve the balance and sustainability of creation. In this context, madrasah principals have an important role as learning leaders who are able to direct the transformation of curriculum, academic culture, and teaching material development toward a more ecological and contextual paradigm of Islamic education.

Through instructional leadership, madrasah principals do not merely function as educational administrators, but also as agents of academic change who encourage teachers to develop PAI teaching materials based on ecotheological values. This approach brings about a shift in the orientation of learning from a normative-ritualistic pattern toward an ethical-transformative paradigm. *Tawhid* is no longer understood merely as a theological affirmation of the oneness of God, but also as the foundation of cosmic awareness that all reality is a manifestation of His signs. Therefore, every human action toward nature carries spiritual and moral consequences. Caring for the environment is understood as an integral part of piety, while damaging it constitutes a denial of the divine mandate.

This study also shows that the development of ecotheology-based PAI teaching materials has the potential to strengthen students' religious moderation. The principles of balance (*tawazun*), justice (*i'tidal*), and responsibility (*mas'uliyah*) find their relevance in the context of ecological relations. In this regard, the instructional leadership of madrasah principals plays a role in building a learning culture that does not only emphasize ritual aspects of religion, but also shapes students' social and ecological awareness. Religious education that is responsive to environmental issues can nurture a generation of Muslims who are religiously committed while also caring for environmental sustainability and humanity.

The urgency of developing this paradigm is further strengthened by the reality of the global environmental crisis, which demands an integrative and interdisciplinary educational approach. The UNESCO report (2024) emphasizes that sustainable education must integrate ethical and spiritual dimensions in order to shape generations that are resilient to climate change and environmental degradation. In this context, madrasah principals, through instructional leadership, hold a strategic position in ensuring that ecological values are integrated into PAI learning in a systematic, contextual, and sustainable manner.

Nevertheless, the implementation of ecotheology-based PAI teaching materials still faces various structural and cultural challenges. Curriculum limitations, teachers' limited ecological literacy, and social paradigms that continue to separate religion from environmental issues remain obstacles to this integration process. Therefore, strong institutional commitment is needed through academic policies, teacher training, learning supervision, and the strengthening of a green madrasah culture led directly by the madrasah principal. Without visionary and transformative instructional leadership, the integration of ecotheology into PAI teaching materials risks remaining at the level of normative discourse alone.

Ultimately, the development of ecotheology-based PAI teaching materials through the instructional leadership of madrasah principals offers a vision of Islamic

education that is integrative, contextual, and oriented toward sustainability. This paradigm affirms that the relationship between God, human beings, and nature is a relationship of trust that demands responsibility, balance, and compassion toward all creation. With strong academic leadership, madrasahs can become spaces for learning transformation that not only shape students who are spiritually religious, but also ecologically civilized and capable of presenting Islam as *rahmatan lil-'alamin* in facing the challenges of the global environmental crisis.

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