

Ecological Jurisprudence and Character Education: A Study of Implementation in the Adiwiyata Program at Madrasahs

Muhammad Anas Maarif¹, Nur Lailatul Hikmah², Muhamad Arif³, Ardianto⁴

^{1,2} Universitas Kh. Abdul Chalim Mojokerto, Indonesia; anasmaarif@uac.ac.id

³ Universitas Agama Islam Al-Azhar Menganti Gresik, Indonesia;

⁴ Institut Agama Islam Daruttaqwa Gresik;

Keywords: Ecological Fiqh, Environmental Care Character, Islamic Education, Adiwiyata, Madrasah.	Abstract The environmental crisis demands an educational approach that is not only technical but also spiritual and moral. This study aims to analyze the implementation of ecological fiqh in shaping students' environmental care character at MTs Al Hikam Jombang through the Adiwiyata program. This research employed a qualitative case study design. Data were collected through in-depth interviews, participatory observation, and documentation, and analyzed using data reduction, display, and conclusion drawing techniques. The findings reveal that ecological fiqh was systematically integrated into the school's vision, mission, curriculum, learning activities, and institutional culture. Fiqh-based values such as muhasabah (self-reflection), mu'ahadah (commitment), mu'āqabah (spiritual sanction), muraqabah (awareness of God's presence), and mujahādah (struggle against ego) were instilled through participatory environmental actions. Students not only gained knowledge of environmental issues but also recognized them as a religious responsibility rooted in the Islamic mandate of stewardship (khalifah) on Earth. This study affirms that fiqh can be reconstructed as a contextual ethical-educational framework, and that Islamic education holds great potential to foster spiritually grounded environmental education.
Kata kunci: Article history: Received: 02-10-2025 Revised 13-02-2026 Accepted 25 -03-2026	Abstrak <i>Krisis lingkungan hidup menuntut adanya pendekatan pendidikan yang tidak hanya teknis, tetapi juga spiritual dan moral. Penelitian ini bertujuan untuk menganalisis implementasi fikih ekologi dalam membentuk karakter peduli lingkungan siswa di MTs Al Hikam Jombang melalui program Adiwiyata. Penelitian ini menggunakan pendekatan kualitatif dengan jenis studi kasus. Data diperoleh melalui wawancara mendalam, observasi partisipatif, dan dokumentasi, kemudian dianalisis menggunakan teknik reduksi, penyajian, dan penarikan kesimpulan. Hasil penelitian menunjukkan bahwa fikih ekologi diintegrasikan secara sistematis dalam visi, misi, kurikulum, pembelajaran, serta budaya madrasah. Nilai-nilai fikih seperti muhasabah, mu'āhadah, mu'āqabah, muraqabah, dan mujahādah berhasil ditanamkan melalui aktivitas nyata yang partisipatif. Siswa tidak hanya memahami pentingnya menjaga lingkungan, tetapi juga menyadari bahwa hal tersebut merupakan bagian dari amanah keislaman sebagai khalifah di bumi. Penelitian ini menegaskan bahwa fikih dapat direkonstruksi sebagai kerangka etik dan edukatif yang kontekstual, dan pendidikan Islam memiliki potensi besar sebagai pelopor pendidikan lingkungan berbasis spiritualitas.</i>
Corresponding Author: Muhammad Anas Maarif Universitas Kh. Abdul Chalim Mojokerto, Indonesia; anasmaarif@uac.ac.id	

INTRODUCTION

The environmental crisis poses a real threat to the survival of life on Earth (Linkola, 2011; Hammer, 2010). Its impacts are increasingly widespread, ranging from global warming and land degradation to recurring ecological disasters. In Indonesia, data from the National Disaster Management Agency (BNPB, 2023) indicates that over 95% of natural disasters in that year were directly linked to environmental damage (Badan Nasional Penanggulangan Bencana, 2023). This phenomenon highlights the importance of fostering ecological awareness that is not merely technical and scientific but also addresses moral and spiritual dimensions (Adow et al., 2024; Al-Barakat et al., 2025; R. W. Sari et al., 2025). In this regard, education plays a strategic role in cultivating an environmentally conscious character from an early age.

Islam, as a religion of mercy to all the world, has emphasized the importance of environmental conservation. The Qur'an prohibits causing corruption on earth (QS. Al-A'rāf: 56) and affirms humanity's role as vicegerents (QS. Al-Baqarah: 30). The concept of ecological jurisprudence (*fiqh al-bi'ah*) emerged as an elaboration of Islamic teachings regarding the relationship between humans and the environment. Yusuf al-Qaradawi places environmental protection (*ḥifẓ al-bi'ah*) among the *maqāṣid al-syarī'ah*, alongside safeguarding religion, life, intellect, lineage, and property (Qaradawi, 2001). Thus, ecological fiqh serves as a normative framework for fostering ecological behavior rooted in faith and social righteousness.

Several studies have demonstrated the contribution of Islamic education in fostering an environmentally conscious character. Fathurahman (2021) emphasizes the importance of teaching ecological fiqh from an early age through the *maqāṣid al-syarī'ah* approach. (Abdillah et al., 2024; Ayyubi et al., 2025; Nurazizah et al., 2024; Sulthon et al., 2024) show that environment-based Islamic education in nature schools effectively fosters students' comprehensive ecological awareness. Ma'arif & Mawardi, (2024) also highlight the role of Islamic Education (PAI) teachers in instilling environmentally conscious values in Islamic boarding schools (*pesantren*). Nevertheless, studies specifically examining the implementation of ecological fiqh in environment-based programs such as Adiwiyata in madrasahs remain very limited (Bahtiar et al., 2025).

Madrasah Tsanawiyah (MTs), as a formal Islamic educational institution, has significant potential to integrate the values of ecological jurisprudence into student character development. One madrasah that has systematically implemented this is MTs Al Hikam Jombang through the Adiwiyata program (Dr. Jasdeep Kaur, 2024). This program not only emphasizes physical aspects, such as waste management and greening, but also internalizes Islamic values, including self-reflection (*muḥasabah*), mutual accountability (*mu'āhadah*), and spiritual striving (*mujahadah*), into students' daily activities (Jauhari et al., 2025; Mukhoiyaroh et al., 2025; Utari et al., 2025). Cahayaningsih, Khozin, & Kamal, (2022) note that an integrated PAI approach incorporating environmental values has proven effective in fostering ecological empathy among students.

This article aims to analyze the urgency and implementation of ecological fiqh in fostering environmentally conscious character among students at MTs Al Hikam Jombang. The main contribution of this paper is to propose an integrative approach between fiqh and character education within the context of Islamic education, while enriching the body of knowledge on environmental education grounded in religious values.

METHOD

This study employs a qualitative case study design (Yin, 2018). This approach was chosen to gain an in-depth understanding of the implementation of ecological fiqh in fostering environmentally conscious character among students at MTs Al Hikam Jombang. The research focuses on the process of internalizing the values of ecological fiqh in learning activities, school culture, and the Adiwiyata program implemented by the madrasah.

The research subjects consisted of the madrasah principal, Islamic Religious Education teachers, the Adiwiyata program coordinator, and students. The research location was MTs Al Hikam Jombang, a madrasah that consistently integrates Islamic values and environmental awareness into its educational system.

Data were collected through observation, in-depth interviews, and documentation (Creswell, 2015). Observations were conducted to understand the daily practices of students and school community members in preserving the environment (Sugiyono, 2017). In-depth interviews were conducted to explore the informants' perspectives and experiences regarding the implementation of ecological fiqh (Emzir, 2014). Documentation was used to examine relevant program documents, curricula, and school activities. The collected data were analyzed using data reduction, data presentation, and conclusion drawing techniques (Miles et al., 2014). To ensure data validity, source and technique triangulation was performed, which involved comparing information from various informants and data collection methods.

RESULT AND DISCUSSION

Result

The implementation of ecological fiqh at MTs Al Hikam Jombang is an active response to the challenges of the environmental crisis through an Islamic educational approach. This madrasah has comprehensively adopted the Adiwiyata program, using it as a vehicle for internalizing Islamic values in students' daily lives. This program is not merely an environmental conservation initiative but also a vehicle for shaping students' character, particularly an environmentally conscious character based on fiqh values.

The implementation process begins with planning, which includes aligning the vision, mission, and curriculum. MTs Al Hikam's vision explicitly states the goal of producing individuals who are religious, knowledgeable, skilled, possess noble character, and are environmentally conscious. In the madrasah's mission, the values of ecological fiqh are reflected in the point that emphasizes the application of the teachings of the Qur'an and Hadith regarding the environment in daily life, as well as in instilling in students the habit of loving, protecting, and preserving the environment, from home to the madrasah.

An interview with the madrasah principal revealed that the implementation of ecological fiqh values has become part of the school's strategic planning:

"We have incorporated ecological fiqh values into the madrasah's vision, because we recognize that protecting the environment is part of worship. Children must be taught to love cleanliness, not just because of rules, but because of their faith," (Interview, Principal of MTs Al Hikam, February 12, 2025).

The environment-based curriculum is designed by incorporating learning indicators relevant to environmental conservation across fiqh, aqidah, akhlak, and other

subjects. For example, in fiqh lessons discussing the chapters on wudu and thaharah, teachers link these topics to water conservation. In an interview, a PAI teacher stated:

“When I teach the chapter on wudu, I emphasize to students the importance of conserving water. I tell them that people who waste water may be committing a sin, because it damages the environment,” (Interview, PAI Teacher, February 14, 2025).

The implementation phases focus on two main areas: integrating environmental values into learning and student participation in hands-on activities. Outside the classroom, the madrasah carries out various participatory environmental activities, including the “Trash Donation” and “Used Cooking Oil Donation” campaigns, tree planting, installing biopores, producing Elco Enzyme compost, and making ecobricks from plastic waste. The Adiwiyata coordinator stated:

“We want the children to understand that waste can be valuable if sorted. We encourage them to make ecobricks from plastic, so they know that environmental responsibility is not just the janitor’s job,” (Interview, Adiwiyata Coordinator, February 17, 2025).

The evaluation phase is conducted through weekly reflections and monitoring by the madrasah’s environmental team. The evaluation is not merely administrative but also reflective, as seen in the “Ngaji Sampah” activity, which connects ecological realities with verses from the Qur’an. Observations indicate that students are shifting their perspective toward the environment. Students are beginning to realize that polluting rivers or littering constitutes a moral transgression. This was confirmed in an interview with a ninth-grade student:

“I used to litter, but now I am ashamed. Whenever I see someone littering, I am reminded of the verse ‘wala tufsidu fil ardh.’ I am afraid of committing a sin,” (Interview, 9th-grade student, February 21, 2025).

Another student from 8th grade also shared a spiritual experience that grew from participating in environmental activities:

“I took part in a used cooking oil donation drive. The money collected goes toward charity. So, protecting the environment is not just about cleanliness – it can also be an act of charity,” (Interview, 8th-Grade Student, February 19, 2025).

Interestingly, the indicators of environmental care identified at MTs Al Hikam Jombang do not merely align with the general indicators set by the Ministry of Education and Culture but are derived from the values of ecological jurisprudence rooted in Sufism and Islamic ethics. Five main principles are identified in the character-building process: muhasabah (self-evaluation), mu’ahadah (self-commitment), mu’aqabah (spiritual accountability), muraqabah (the awareness that Allah is watching), and mujahadah (striving against oneself to protect the environment). These values are internalized not only through lectures and learning, but also through repeated, consistent direct practice.

This madrasah has also established a partnership with the Environmental Agency for program training and evaluation. Documentation shows that MTs Al Hikam has received various Adiwiyata awards at the district and national levels. Currently, the madrasah is preparing to advance to the Adiwiyata Mandiri category. Collaboration with external agencies also strengthens the legitimacy and sustainability of the Islamic-values-based environmental program.

Thus, the results of this study indicate that implementing ecological jurisprudence through the Adiwiyata program at MTs Al Hikam not only creates a clean, healthy environment but also fosters an environmentally conscious character rooted in Islamic

values. Environmental education is no longer separated from religious education but has instead become an integral part of the process of forming a complete Islamic personality.

Based on the above research results, the following research findings can be concluded:

Table 1. Research Findings on the Implementation of Ecological Fiqh at MTs Al Hikam Jombang

Aspect	Findings
Integration of Ecological Fiqh Values	Fiqh values such as muhasabah (self-reflection), mu`āhadah (commitment), mu`āqabah (self-accountability), muraqabah (self-awareness of divine supervision), and mujāhadah (self-discipline) are integrated into the vision, mission, curriculum, and activities of the madrasah
Learning Strategies	Teachers relate fiqh lessons to environmental issues (e.g., ablution practices, water conservation, impurity, and environmental cleanliness)
Islamic-Based Adiwiyata Activities	Practical activities such as waste charity, used cooking oil recycling, biopore implementation, eco-enzyme production, and ecobrick initiatives are conducted using religious narratives (social worship and responsibility as khalifah)
Value Internalization	Students demonstrate changes in attitudes and environmental awareness based on spiritual values, perceiving littering as a sinful act
Role of School Culture	Weekly “Ngaji Sampah” (waste study sessions), cleanliness duty schedules, and monitoring by the madrasah’s internal environmental team are implemented
Short-Term Outcomes	Students actively participate and demonstrate environmentally responsible behavior within the school
Challenges	Sustainability of character development after graduation requires strengthening post-madrasah networks

Discussion

Research findings indicate that implementing ecological fiqh at MTs Al Hikam Jombang through the Adiwiyata program has successfully fostered an environmentally conscious character among students. Conceptually, these results reinforce the notion that fiqh not only governs the vertical relationship between humans and God but also the horizontal relationship between humans and nature (Gufon, 2007; Imamah, Sugiran, Aripin, & Hidayat, 2022). This aligns with Yusuf al-Qaradawi’s view that environmental conservation is part of the maqāṣid al-syarī’ah, specifically ḥifẓ al-bi’ah (environmental preservation), which is equally as important as safeguarding religion, life, intellect, lineage, and property (Qaradawi, 2001).

The application of ecological jurisprudence in this madrasah is not limited to the theoretical level. It is implemented through integration into the vision, mission, and curriculum, as well as through concrete, student-participatory activities such as waste management, water and energy conservation, and environmental awareness campaigns (Ayatullah, 2024). In this context, MTs Al Hikam Jombang has successfully translated normative Islamic values into transformative educational practices. This reflects a holistic approach to Islamic education, which integrates the dimensions of *tadbīr* (management), *ta'dīb* (character formation), and *tazkiyah* (purification of the soul).

The strong spiritual approach in environmental education activities at MTs Al Hikam is also evident in the internalized Sufi values, such as *muhasabah* (self-reflection), *mu'ahadah* (self-commitment), *mu'āqabah* (spiritual discipline), *muraqabah* (the awareness that Allah is always watching), and *mujāhadah* (struggle against the ego for the sake of the environment). These values demonstrate that the environmentally conscious character being cultivated is not merely driven by social motivation, but by a deep sense of faith.

This discussion also highlights that a religious values-based approach holds advantages over conventional ecological approaches (Chapman et al., 2008). Many environmental programs fail because they rely solely on campaigns and technical regulations, without addressing the spiritual roots of individuals (R. H. Lubis, 2019). However, at MTs Al Hikam, students are positioned not merely as participants in activities, but as *khalīfah fi al-ardh*, bearing a moral and spiritual trust to care for the earth.

These findings are consistent with Fathurahman's (2021) research, which states that the *maqāṣid al-syarī'ah* approach in education can lay a strong foundation for environmentally conscious character from an early age. Research by (Abdillah et al., 2024) also shows that schools that integrate Islamic values into environmental activities are more successful at instilling ecological awareness. However, the contribution of this study lies in emphasizing the role of *fiqh* as a normative framework rather than merely general ethical principles and in its focus on the madrasah environment within *pesantren* settings. This area has received limited scholarly attention.

The success of the Adiwiyata program based on Islamic values at MTs Al Hikam is also supported by an inclusive and consistent school culture. The cultivation of good habits is carried out through role modeling, habituation, a reward system, and reflective activities such as "Ngaji Sampah" (Trash Recitation), which links environmental issues to verses and hadiths. This demonstrates that effective environmental education requires synergy between rational, emotional, and spiritual approaches (Wardhani, 2013; Luneto, 2014).

However, this initiative also faces challenges, particularly in maintaining consistency after students graduate. Although students have shown great enthusiasm, as evidenced by their interview statements that they want to "become environmental pioneers in their respective regions," the sustainability of these values ultimately depends on their subsequent social environment. Therefore, there needs to be an alum network or some form of post-graduation mentoring so that the values that have been instilled are not simply lost.

From a theoretical perspective, this study reinforces the idea that *fiqh* can be reconstructed to address contemporary issues. *Fiqh* not only regulates ritual worship but can also serve as a tool for social change (Faisal, 2010; M. Lubis et al., 2025). The ecological *fiqh* approach applied in this madrasah aligns with efforts to renew Islamic law contextually and functionally. As Ali Yafie emphasizes, the environment must be

included in the al-darūriyyāt al-sittah, the six essential principles of survival that Muslims must not neglect (Yafie, 2006).

Thus, this discussion underscores that an ecological fiqh approach in education not only produces students who understand the importance of preserving the environment but also fosters a sustainable spiritual-ecological character (Khuadthong et al., 2025; Rahman et al., 2025). Islamic education has a significant opportunity to become a pioneer in environmental education in Indonesia by grounding ecological awareness in Sharia values.

This research opens a new space for dialogue between fiqh and ecology within Islamic education. While fiqh education has traditionally been viewed as limited to the laws of ritual worship, this approach can serve as a means to internalize ecological values and strengthen character. This aligns with the direction of contextual Islamic renewal, which addresses not only issues of worship but also global challenges such as the environmental crisis.

This section elaborates on the interpretation of research findings at MTs Al Hikam Jombang by focusing on the alignment of Islamic ecotheology implementation, comparisons with relevant studies, as well as the implications and challenges that arise. This approach aims to strengthen scientific contributions through both theoretical and practical lenses, affirming the relevance of ecotheology in contemporary Islamic education (Jauhari et al., 2025; Rozanita et al., 2026).

The model of green school management based on *tawhid*, such as Eco-Pesantren, offers an applicable framework for integrating Islamic values with environmental conservation initiatives (Al-Barakat et al., 2025; Charry López et al., 2026). The application of the concepts of *khalifah* (stewardship) and *amanah* (trust) in an ecological context, as reflected in the Eco-Pesantren program, emphasizes spiritual responsibility for environmental sustainability through the integration of ecological terminology into religious education and da'wah (Adiyono et al., 2025). This approach aligns with the integration of Islamic ecological principles such as *khalifah*, *maslahah*, *hima*, and the prohibition of *ifsad* into madrasa curricula and programs, reinforced by spiritual and normative foundations to foster deep environmental awareness (Al-Barakat et al., 2025).

This study reflects how Islamic teachings can serve as an important guide for environmentally friendly behavior, as emphasized in the eco-pesantren program initiated by the Ministry of Environment (Jumadiyah & Zumrotun, 2024). The concept of Green Islam Education as a model of Islamic education also highlights the potential of a *tawhid*-based curriculum to cultivate strong ecological awareness, in line with its implementation in various public policies such as the Decree of the Minister of Religious Affairs No. 244 of 2025. The implementation of ecotheology in Islamic religious education policies and the KUA Hijau program demonstrates a systematic effort to integrate spiritual values with ecological responsibility at the national level (Dr. Jasdeep Kaur, 2024).

This integration extends beyond curricular aspects to include practical activities that promote environmental care as an integral part of worship, as implemented in pesantren through innovative programs that instill deep appreciation and responsibility toward the environment (Lapasere et al., 2025; Syukur et al., 2024). This approach resonates with findings on *tawhid*-based environmental literacy, which significantly enhances students' environmental awareness and responsibility through theological instruction, experiential learning, and institutional support (Hs, 2024).

The Green Islam Education model explicitly integrates ecotheological values into the curriculum, encouraging the development of ecological awareness grounded in spirituality. Cosmological principles within *tawhid*, such as *mīzān* (balance) and *amanah*, require humans to maintain the order of creation and actualize their role as *khalifah* through ecological consciousness. This is further reinforced by the concept of sustainable development rooted in Islamic teachings within pesantren communities, promoting values such as *tawhid*, *khalifah*, and *mīzān* in daily practices to foster harmonious relationships between humans and nature (Mokhtar et al., 2025).

The implementation of these values through various programs in Islamic educational environments demonstrates that Islamic-based environmental education can be an effective strategy for climate change mitigation and for shaping environmentally responsible character among students (Adawiah et al., 2022; Purnawanto, 2024). This awareness is also supported by integrating environmental education into all subjects, including Islamic Religious Education, to cultivate love and care for the environment as a manifestation of humanity's role as *khalifah* on earth (W. D. Sari, 2025). This step aligns with the eco-pesantren program, which emphasizes educational values to prepare a generation of moderate scholars with strong morals, ethics, and environmental insight.

The integration of Islamic values such as *khalifah* and *maslahah* encourages responsible resource management, in line with the Value-Belief-Norm Theory, which states that values and beliefs can influence personal norms and trigger sustainable actions (Samdani et al., 2025). Strengthening Islamic values through education is crucial in fostering motivation for social change movements encompassing ecological, economic, and institutional aspects, as expressed by Yaqub, where individual behavior aligned with Islamic teachings contributes to environmental preservation (Aziz et al., 2024).

Education also plays a vital role in transforming beliefs, values, and understanding regarding the importance of maintaining a healthy and high-quality environment, as well as applying these in concrete actions. This holistic approach reflects concepts such as *tawhid*, *khalq*, *mīzān*, *ihsan*, *fasad*, and *khalifah* as strong foundations for value-based education in sustainable development rooted in Islamic beliefs. This approach implies the need to develop innovation, creativity, and knowledge in education to support a sustainable development paradigm that goes beyond consumerism and waste production.

CONCLUSION

This study demonstrates that implementing ecological fiqh at MTs Al Hikam Jombang through the Adiwiyata program has proven effective in fostering an environmentally conscious character among students. The values of ecological fiqh are not only integrated into instruction and the curriculum but are also embodied in the school culture and student-led activities. The five main principles of character formation, muhasabah, mu'āhadah, mu'āqabah, muraqabah, and mujahādah, have been successfully internalized by students as a manifestation of ecological awareness rooted in Islamic faith and spirituality.

This approach not only encourages students to behave in an environmentally friendly manner but also fosters the awareness that protecting the environment is part of the Islamic trust (*amanah*) and the responsibility as stewards of the earth. This program successfully translates fiqh concepts into contextual and transformative

practices. Thus, fiqh can be reconstructed as an ethical and educational foundation for addressing global issues such as the environmental crisis.

REFERENCES

- Abdillah, A. R., Mu'ti, A., & Miranto, S. (2024). Pembentukan karakter peduli lingkungan melalui model pendidikan Islam berbasis lingkungan hidup di SMP Alam School of Universe Bogor. *Educatia: Jurnal Pendidikan Dan Agama Islam*, 14(1). <https://jurnal.staiyogyakarta.ac.id/index.php/edu/article/view/37>
- Adiyono, A., Patimah, L., Malik, A., & Abdurrohm, A. (2025). Teacher Creativity and Students' Comprehension of Religious Values: Evidence from Inclusive Education. *At-Tadzkir: Islamic Education Journal*, 4(2), 194–208. <https://doi.org/10.59373/attadzkir.v4i2.215>
- Adow, A. H. E., Safer, M. M., Mohammed, M. G. H., Alam, M. S., & Sulphey, M. M. (2024). A synthesis of academic literature on eco-spirituality. *Global Journal of Environmental Science & Management (GJESM)*, 10(4), 2163. <https://doi.org/10.22034/gjesm.2024.04.40>
- Al-Barakat, A., AlAli, R., Alotaibi, S., Alrashood, J., Abdullatif, A., & Zaher, A. (2025). Science Education as a Pathway to Sustainable Awareness: Teachers' Perceptions on Fostering Understanding of Humans and the Environment: A Qualitative Study. *Sustainability*, 17(15), 7136. <https://doi.org/10.3390/su17157136>
- Ayatullah, H. (2024). *Konsep Ekologi Dalam Al-Qur'an Dan Implementasinya Di Pondok Pesantren Al Ashriyyah Nurul Iman, Bogor* [Masters, Institut PTIQ Jakarta]. <https://repository.ptiq.ac.id/id/eprint/1538/>
- Ayyubi, I. I. A., Nurhikmah, Prayetno, E., Noerzanah, F., & Susilo, A. (2025). The Implementation of the Contextual Teaching and Learning Approach in Fiqh Education to Instill Religious Moderation. *At-Tadzkir: Islamic Education Journal*, 4(2), 219–234. <https://doi.org/10.59373/attadzkir.v4i2.90>
- Aziz, M. B., Fitriani, R. N., Abidin, A. A., Dwiyama, F., & Toha, M. (2024). Cultural Heritage as a Driver of Educational Choices: Evaluating the Role of Bugis Values in the Selection of Islamic Private Schools in Indonesia. *Nazhruna: Jurnal Pendidikan Islam*, 7(3), 726–741. <https://doi.org/10.31538/nzh.v7i3.110>
- Badan Nasional Penanggulangan Bencana. (2023). *Data bencana alam Indonesia 2023*. BNPB. <https://bnpb.go.id>
- Bahtiar, A., Rizal, S., Roisyah, H., & Angkananon, C. (2025). Integrating Eco-Sufi Values into Environmental Education through the Adiwiyata Madrasah Program. *Journal of Islamic Education Research*, 6(3), 261–274. <https://doi.org/10.35719/jier.v6i3.486>
- Cahyaningsih, I., Khozin, K., & Kamal, M. (2022). Pembentukan karakter peduli lingkungan melalui Pendidikan Agama Islam di Sekolah Dasar. *Dirasat: Jurnal Manajemen Dan Pendidikan Islam*, 8(1). <https://journal.unipdu.ac.id/index.php/dirasat/article/view/3015>
- Chapman, A. R., Petersen, R. L., & Smith-Moran, B. (2008). *Bumi yang terdesak: Perspektif ilmu dan agama mengenai konsumsi, populasi, dan keberlanjutan*. Mizan Pustaka.
- Charry López, S., Rivero Amorocho, L. M., & Bernate, J. A. (2026). Teacher perceptions about inclusive education in the school environment. *European Public and Social Innovation Review*, 11. <https://doi.org/10.31637/epsir-2026-2059>
- Creswell, J. W. (2015). Penelitian kualitatif & desain riset. *Yogyakarta: Pustaka Pelajar*, 1–634.

- Dr. Jasdeep Kaur. (2024). *Nature and Spirituality as a Legal Response to Environmental Jurisprudence* (SSRN Scholarly Paper No. 5142745). Social Science Research Network. <https://doi.org/10.2139/ssrn.5142745>
- Emzir. (2014). *Metodologi Penelitian Kualitatif: Analisis Data*. PT Raja Grafindo.
- Faisal, A. (2010). Nuansa Fiqh Sosial KH. MA. Sahal Mahfudh. *Al-Ulum*, 10(2), Article 2. <https://journal.iaingorontalo.ac.id/index.php/au/article/view/59>
- Fathurahman, M. (2021). Penanaman karakter peduli lingkungan melalui pengajaran fikih ekologi pada anak usia dini. *WISDOM: Jurnal Pendidikan Anak Usia Dini*, 2(2). <https://jurnal.iainponorogo.ac.id/index.php/wisdom/article/view/3367>
- Gufron, A. (2007). Islam dan Konservasi Lingkungan (Telaah Pemikiran Fikih Lingkungan Yusuf Al-Qaradhawi). *Millah: Journal of Religious Studies*, 55–76. <https://doi.org/10.20885/millah.vol6.iss2.art5>
- Hammer, Y. (2010). Confronting ecological futures: Global environmental crises in contemporary survival quests for young adults. *Barnboken*, 33(2), 18787. <https://doi.org/10.14811/clr.v33i2.15>
- Hs, M. (2024). Construction of Social Education Theory from 'Ulwan's Perspective to Respond to Social Problems in the Digital Era/Society 5.0: A Qualitative Content Analysis Study. *Jurnal Pendidikan Islam*, 13(2), 169–181. <https://doi.org/10.14421/jpi.2024.132.169-181>
- Imamah, Y. H., Sugiran, Aripin, & Hidayat, N. (2022). INTEGRASI PENDIDIKAN ISLAM DAN PENDIDIKAN LINGKUNGAN HIDUP. *JURNAL MUBTADIIN*, 8(01), Article 01. <https://journal.an-nur.ac.id/index.php/mubtadiin/article/view/171>
- Jauhari, I., Akhyak, A., Aziz, A., & Ajizah, R. U. N. (2025). Management of Excellent Madrasa Program in Increasing Institutional Competitiveness. *Attaqwa: Jurnal Ilmu Pendidikan Islam*, 21(2), 93–108. <https://doi.org/10.54069/attaqwa.v21i2.976>
- Jumadiyah, N., & Zumrotun, E. (2024). Pengaruh Penggunaan Metode Jarimatika Terhadap Literasi Numerasi Melalui Program Kampus Mengajar Batch 5 di Sekolah Dasar. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 7(1), 12–22. <https://doi.org/10.54069/attadrib.v7i1.710>
- Khuadthong, B., Taweephol, R., Promsivapallop, P., Imjai, N., & Aujiropongpan, S. (2025). How do ecological literacy, green mindfulness, and social contingency thinking shape sustainable tourism behaviors of Thai Gen Z hospitality students? *Journal of Hospitality, Leisure, Sport & Tourism Education*, 37, 100584. <https://doi.org/10.1016/j.jhlste.2025.100584>
- Lapasere, S., Julianti, N., Herlina, H., Rizal, R., & Guci, A. A. J. (2025). Pembelajaran Tanggap Budaya (Culturally Responsive Teaching) di Kelas IV Sekolah Dasar. *Attadrib: Jurnal Pendidikan Guru Madrasah Ibtidaiyah*, 8(1), 98–112. <https://doi.org/10.54069/attadrib.v8i1.859>
- Linkola, P. (2011). *Can Life Prevail?: A Revolutionary Approach to the Environmental Crisis*. Arktos.
- Lubis, M., Arifin, T., Ridwan, A. H., Zulfaidah, Rosadi, A., & Solehudin, E. (2025). Reformulation of Islamic Stock Law: The Application of Taṣarrufāt al-Rasūl and Maqāṣid al-Syarī'ah to Develop a Dynamic and Sustainable Islamic Capital Market in Indonesia. *Journal of Posthumanism*, 5(3), Article 3. <https://doi.org/10.63332/joph.v5i3.913>
- Lubis, R. H. (2019). *Spiritualitas Bencana: Konteks pengetahuan lokal dalam penanggulangan bencana*. Pustaka Kaji.

- Luneto, B. (2014). Pendidikan Karakter Berbasis Iq, Eq, Sq. *Irfani*, 10(1), 29305. <https://www.neliti.com/publications/29305/>
- Ma'arif, M. I., & Mawardi, K. (2024). Peran guru pendidikan Islam dalam membentuk karakter peduli lingkungan pada santri di Pondok Pesantren Modern ZIIS Cilongok Banyumas. *Jurnal Kependidikan*, 12(1). <https://ejournal.uinsaizu.ac.id/index.php/jurnalkependidikan/article/view/9801>
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook*. 3rd. Thousand Oaks, CA: Sage.
- Mokhtar, M. Y. O., Nasir, N. S. M., Ya' Cob, Z., Zakaria, U. A. U. M., & Khalifa, G. S. A. (2025). Authentic Leadership as Amanah: Enhancing Employee Commitment to Change in Higher Education Institutions. *Global Journal Al-Thaqafah*, 277-295. <https://doi.org/10.7187/GJATSI102025-17>
- Mukhoiyaroh, M., Mujiono, M., & Mukaromah, L. (2025). Training Activity Program in Teacher Competency Development Marasa Ibtidaiyah. *Attaqwa: Jurnal Ilmu Pendidikan Islam*, 21(1), 44-56. <https://doi.org/10.54069/attaqwa.v21i1.971>
- Nurazizah, Zainuddin, A., & Ismawati. (2024). Application of Demonstration and Experiment Methods in Fiqh Learning in Improving Student Psychomotor Skills. *Journal of Education and Learning Innovation*, 1(2), 254-264. <https://doi.org/10.59373/jelin.v1i2.77>
- Qaradawi, Y. (2001). *Ri'āyat al-Bī'ah fī al-Sharī'ah al-Islāmiyyah*. Dār al-Shurūq.
- Rahman, R., Ismail, F., Nurhayati, N., & Nazar, I. A. (2025). Ecological Ethics in Islamic Religious Education Textbooks: A Qualitative Representation Analysis. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(3), 844-861. <https://doi.org/10.31538/tijie.v6i3.1995>
- Rozanita, T. P., Usman, M. U. K., & Azzukhrufi, J. R. (2026). Dialectics of Indonesian Culture and Malaysian Local Wisdom: Multicultural Learning Strategies at Sekolah Indonesia Kuala Lumpur. *Attaqwa: Jurnal Ilmu Pendidikan Islam*, 22(1), 1-12. <https://doi.org/10.54069/attaqwa.v22i1.1115>
- Samdani, S., Syafruddin, R., Tamjidnor, T., & Abda, M. S. (2025). Internalization of Sufism Values in Learning Moral Beliefs in Madrasah Aliyah. *Tafkir: Interdisciplinary Journal of Islamic Education*, 6(4), 1104-1117. <https://doi.org/10.31538/tijie.v6i4.2350>
- Sari, R. W., Syahsiami, L., & Subagyo, A. (2025). Tinjauan Teoritis Integrasi Agama dan Sains dalam Pendidikan. *Realita: Jurnal Penelitian Dan Kebudayaan Islam*, 23(1), 19-36. <https://doi.org/10.30762/realita.v23i1.483>
- Sari, W. D. (2025). The Love Curriculum Approach in Overcoming Learning Loss in Primary and Secondary Schools: A Review of the Literature and Implications of Islamic Education. *At-Tadzkir: Islamic Education Journal*, 4(1), 71-80. <https://doi.org/10.59373/attadzkir.v4i1.94>
- Sugiyono. (2017). *Metode penelitian pendidikan: (Pendekatan Kuantitatif, Kualitatif dan R & D)*. Alfabeta.
- Sulthon, M., Syafi'i, I., & Nizami, A. G. (2024). Contemporary Fiqh in Indonesia: The Dynamics of Istinbāt al-Aḥkām at Ma'had Aly Salafiyah Shafi'iyah Sukorejo Situbondo. *Ahkam: Jurnal Ilmu Syariah*, 24(1), 119-134. <https://doi.org/10.15408/ajis.v24i1.32174>
- Syukur, F., Maghfurin, A., Marhamah, U., & Jehwae, P. (2024). Integration of Artificial Intelligence in Islamic Higher Education: Comparative Responses between

- Indonesia and Thailand. *Nazhruna: Jurnal Pendidikan Islam*, 7(3), 531-553. <https://doi.org/10.31538/nzh.v7i3.13>
- Utari, D., Afgani, M. W., & Afriantoni, A. (2025). Evaluasi Pelaksanaan Program Sekolah Adiwiyata di MI Ikhlasiyah Palembang. *Indonesian Research Journal on Education*, 5(2), Article 2. <https://doi.org/10.31004/irje.v5i2.2599>
- Wardhani, N. W. (2013). PEMBELAJARAN NILAI-NILAI KEARIFAN LOKAL SEBAGAI PENGUAT KARAKTER BANGSA MELALUI PENDIDIKAN INFORMAL. *Jurnal Penelitian Pendidikan*, 13(1), Article 1. <https://doi.org/10.17509/jpp.v13i1.3504>
- Yafie, A. (2006). *Merintis Fikih Lingkungan Hidup*. Yayasan Kalpataru dan LPSDA.
- Yin, R. K. (2018). *Case study research and applications* (Vol. 6). Sage Thousand Oaks, CA.