



Madinah.JSI by IAI TABAH is licensed under a [Creative Commons Attribution-ShareAlike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

Submitted	Accepted	Published
28 March 2026	16 May 2026	18 May 2026
DOI; <a href="https://doi.org/10.58518/madinah.v13i1.4711">https://doi.org/10.58518/madinah.v13i1.4711</a>		

## ISLAMIC ENVIRONMENTAL EDUCATION FOR ENVIRONMENTAL SUSTAINABILITY: ANALYSIS BASED ON SECONDARY DATA FROM RECENT RESEARCH

Ridha Aulia

Universitas Islam Negeri Sunan Kalijaga, Yogyakarta, Indonesia

E-mail: [ridhaaulia2000@gmail.com](mailto:ridhaaulia2000@gmail.com)

Dawam Suprayogi

Universitas Jambi, Indonesia

E-mail: [dawamsuprayogi@unja.ac.id](mailto:dawamsuprayogi@unja.ac.id)

Fenti Inayati

Institut Agama Islam PERSIS Garut, Indonesia

E-mail: [Fentiinayati@iaipersisgarut.ac.id](mailto:Fentiinayati@iaipersisgarut.ac.id)

Rahmati

Universitas Islam Negeri Ar-Raniry Banda Aceh, Indonesia

E-mail: [rahmati.rz@ar-raniry.ac.id](mailto:rahmati.rz@ar-raniry.ac.id)

Muhammad Rizqiy

Islamic University of Medina, Saudi Arabia

E-mail: [mamadrzqy@gmail.com](mailto:mamadrzqy@gmail.com)

**ABSTRACT:** The global ecological crisis demands an education rooted in moral and spiritual values. Islamic Environmental Education is an interdisciplinary field that combines Islamic theology, environmental ethics, and pedagogy. This study identifies research trends, conceptual gaps, and future directions by integrating bibliometric mapping and a literature review. Using VOSviewer and manual analysis of 103 documents of various types (articles, conference proceedings, and book chapters), this study maps key terms, themes, and developments. The results indicate that Islamic Environmental Education is developing within five main clusters: the implementation of environmental education in Islamic educational institutions; Islam and sustainability; Islamic values and sustainable development; religion and climate change; and Islamic-based environmental character education. Overlay analysis reveals a shift in research focus from conceptual and normative discussions toward practical implementation, environmental



governance, and global sustainability. This study also found that the integration of Islamic values into environmental education holds great potential for fostering ecological awareness and sustainable behavior through Islamic schools, pesantren, and eco-pesantren. However, research gaps remain, evidenced by the weak interconnections between certain topics and the scarcity of empirical research on the effectiveness of Islamic Environmental Education programs. This study offers a novel approach by systematically identifying research gaps in the field of Islamic Environmental Education through keyword network visualization, overlay, and density analysis. These findings provide a new direction for the development of an Islamic value-based environmental education model that is more practical, empirical, and measurable.

**Keywords:** Islamic environmental education, environmental education, sustainability, bibliometrics, Vosviewer

**ABSTRAK:** Krisis ekologi global menuntut pendidikan yang berakar pada nilai-nilai moral dan spiritual. Pendidikan Lingkungan Islam merupakan bidang interdisipliner yang menggabungkan teologi Islam, etika lingkungan, dan pedagogi. Studi ini mengidentifikasi tren penelitian, kesenjangan konseptual, dan arah masa depan dengan mengintegrasikan pemetaan bibliometrik dan tinjauan literatur. Dengan menggunakan VOSviewer dan analisis manual terhadap 103 Dokumen dari berbagai type (artikel, prosiding, dan bab buku), studi ini memetakan istilah kunci, tema, dan perkembangan. Hasil penelitian menunjukkan bahwa Pendidikan Lingkungan Islam berkembang dalam lima klaster utama, yaitu: implementasi pendidikan lingkungan pada lembaga pendidikan Islam, Islam dan keberlanjutan, nilai-nilai Islam dan pembangunan berkelanjutan, agama dan perubahan iklim, serta pendidikan karakter lingkungan berbasis Islam. Analisis overlay menunjukkan adanya pergeseran penelitian dari pembahasan konseptual dan normatif menuju implementasi praktis, tata kelola lingkungan, dan keberlanjutan global. Penelitian ini juga menemukan bahwa integrasi nilai-nilai Islam dalam pendidikan lingkungan memiliki potensi besar dalam membangun kesadaran ekologis dan perilaku berkelanjutan melalui sekolah Islam, pesantren, dan eco-pesantren. Namun demikian, masih terdapat kesenjangan penelitian yang ditunjukkan oleh lemahnya keterhubungan beberapa topik dan minimnya penelitian empiris mengenai efektivitas program Pendidikan Lingkungan Islam. Penelitian ini memiliki kebaruan dalam mengidentifikasi secara sistematis kesenjangan penelitian (research gap) pada bidang Pendidikan Lingkungan Islam melalui visualisasi jaringan kata kunci, overlay, dan density analysis. Temuan ini memberikan arah baru bagi pengembangan model pendidikan lingkungan berbasis nilai Islam yang lebih aplikatif, empiris, dan terukur.

**Kata Kunci:** Pendidikan lingkungan islam, pendidikan lingkungan, keberlanjutan, bibliometrik, Vosviewer

## INTRODUCTION

Ecosystem stability directly affects human well-being, making environmental education a global priority. Islamic-based environmental education utilizes religious teachings to promote environmental responsibility. Key concepts such as amanah (trust), khalifah (stewardship),



and tawhid (monotheism) in Islamic doctrine form a robust moral framework for the human-nature relationship. Islamic Religious Education (IRE) holds significant potential to develop students' character and environmental awareness, thereby supporting environmental sustainability.<sup>1</sup>

Many verses in the Qur'an emphasize the importance of prohibiting environmental destruction and maintaining the balance of nature. In the Islamic holy book, ecological principles provide a theological foundation for environmental education<sup>2</sup>. Surahs such as Surah Al-Baqarah (2:164) and Al-An'am (6:141) teach Muslims to respect nature as an amanah entrusted by Allah SWT. The hadiths of the Prophet Muhammad SAW also emphasize the importance of preserving nature as part of religious duty, making these concepts the basis for education that fosters ecological awareness.<sup>3</sup>

Integrating these values into the educational curriculum enables Islamic religious education to foster environmental concern among the younger generation. Through an approach that emphasizes Islamic faith, students develop a deeper understanding of theological principles and their practical application in environmental conservation. Teaching environmental values in Islamic religious education can shape students' attitudes and behaviors toward environmental stewardship.<sup>4</sup>

Although Islamic religious education has the potential to promote environmental awareness, these values have not been sufficiently developed in the current curriculum. Many students have not internalized or applied religious teachings in their daily practices, particularly regarding environmental protection.<sup>5</sup> This indicates a mismatch between the theoretical

---

<sup>1</sup> JFua et al., "Development of Environmental Care Attitude of Students through Religion Education Approach in Indonesia," *IOP Conference Series: Earth and Environmental Science* 175 (July 2018): 012229, <https://doi.org/10.1088/1755-1315/175/1/012229>; Irawan, Akil, and Acep Nurlaeli, "Implementation of Islamic Religious Education Governance in Forming Environmentally Concerned Characters at State High School 5 Karawang," *ENDLESS: International Journal of Future Studies* 4, no. 2 (June 2021): 128-37, <https://doi.org/10.54783/endless.v4i2.71>.

<sup>2</sup> Mukhsin Mukhsin and Ilzam Hubby Dzirkillah Alfani, "Integrating Islamic Eco-Theology into Religious Education: A New Paradigm for Curriculum Development," *Indonesian Journal of Islamic Religious Education* 3, no. 2 (December 2025): 183-96, <https://doi.org/10.63243/mp1r1js26>.

<sup>3</sup> Ipin Tajul Aripin, "Ayat-Ayat Al-Quran Tentang Pemeliharaan Lingkungan," *Ahwaluna | Jurnal Hukum Keluarga Islam* 6, no. 1 (March 2025): 149-64, <https://doi.org/10.70143/ahwalunajurnalhukumkeluargaislam.v6i1.459>; Nur Adibah Mohidem and Zailina Hashim, "Integrating Environment with Health: An Islamic Perspective," *Social Sciences* 12, no. 6 (May 2023): 321, <https://doi.org/10.3390/socsci12060321>.

<sup>4</sup> Abdelaziz El Moussaouy, Jamila Abderbi, and Mimoune Daoudi, "Environmental Education in the Teaching and the Learning of Scientific Disciplines in Moroccan High Schools," *International Education Studies* 7, no. 4 (March 2014): p33, <https://doi.org/10.5539/ies.v7n4p33>; A. Fakhruddin et al., "The Development of Learning Content of Islamic Religious Education (IRE) Courses on Environmental Conservation in Higher Education," *IOP Conference Series: Earth and Environmental Science* 145 (April 2018): 012125, <https://doi.org/10.1088/1755-1315/145/1/012125>.

<sup>5</sup> Fitri Balqis Khusnul Khotimah et al., "Comparison of Motivation to Learn Islamic Religious Education in Boarding and Non-Boarding Students in Schools," *EDURELIGIA: Jurnal Pendidikan Agama Islam* 9, no. 1 (June 2025): 1-18, <https://doi.org/10.33650/edureligia.v9i1.10697>.



framework of Islamic religious education and its practical implementation.<sup>6</sup> Reviewing the methods of teaching Islamic values in schools, particularly those related to environmental awareness, is crucial for determining their effectiveness in promoting environmental protection. Research indicates that Islamic religious education can effectively integrate moral and environmental principles, equipping students to understand sustainability and participate in concrete environmental actions<sup>7</sup>

A literature review indicates that environmental education is a relatively new addition to Islamic educational institutions, including Islamic boarding schools (pesantren), thus requiring the development of appropriate curricula.<sup>8</sup> Gunawan et al. (2019) state that environmental education is often delivered through the hidden curriculum, which encompasses educational activities not explicitly regulated by formal curriculum guidelines. For example, at the Hidayatullah Islamic Boarding School in Indonesia, Islamic environmental education operates as a hidden curriculum, promoting behaviors that support environmental conservation. Environmental education can be integrated into both the national curriculum and the curriculum of Islamic boarding schools in Indonesia.<sup>9</sup> Instruction may include practical demonstrations of environmental management consistent with Islamic teachings.<sup>10</sup>

Few studies have systematically synthesized findings across various sectors of Islamic Environmental Education, although the positive impact of Islamic education on environmental awareness has been widely recognized. This study aims to systematically review and synthesize empirical research on the relationship between Islamic education and environmental awareness. This review also seeks to identify significant research gaps and propose directions for future research.

<sup>6</sup> Arlina Arlina and Didik Santoso, "Model Pengembangan Kecerdasan Spiritual Dalam Pembelajaran Akhlak Di Pesantren Modern Indonesia," *Ta'dib* 23, no. 1 (June 2020): 39, <https://doi.org/10.31958/jt.v23i1.1863>.

<sup>7</sup> Joko Purnomo et al., "Prophetic Approach in Environmental Education and Community Empowerment: A Case Study of Sustainable Pesantren Development," *Revista de Gestão Social e Ambiental* 18, no. 8 (April 2024): e06259, <https://doi.org/10.24857/rgsa.v18n8-047>; Rohmatulloh Rohmatulloh et al., "Energy-Saving Triangle: Internalizing Islamic Ethical Values on Energy Saving in Integrative Learning," *Religions* 14, no. 10 (October 2023): 1284, <https://doi.org/10.3390/rel14101284>; Syukri Syukri et al., "Integration of Islamic Values with Environmental Ethics in Pesantren Education: A Case Study at Darularafah Raya Pesantren," *Jurnal Pendidikan Islam* 13, no. 1 (June 2024): 1-12, <https://doi.org/10.14421/jpi.2024.131.1-12>.

<sup>8</sup> Muhammad Slamet Yahya, "Hidden Curriculum Pada Sistem Pendidikan Sekolah Tinggi Agama Islam Negeri (Stain) Purwokerto Tahun 2013," *Jurnal Kependidikan* 1, no. 1 (2013): 123-49, <https://doi.org/10.24090/jk.v1i1.535>.

<sup>9</sup> Emtizal Saprodi, Wanjat Kastolani, and Epon Ningrum, "Integration of Environmental Education in Eco Pesantren Daarut Tauhiid Bandung," *Proceeding ISETH (International Summit on Science, Technology, and Humanity)*, 2019, 713-20, <https://doi.org/10.23917/iseth.1517>.

<sup>10</sup> M. Harja Efendi et al., "Environmental Conservation Education by Applying Islamic Values," *Journal of Education* 4, no. 2 (2017).



## METHOD

This study employs a descriptive methodology that integrates bibliometric analysis. The bibliometric analysis focuses on citation analysis to systematically review publications within the research scope and identify emerging research trends, concepts, and relevant keywords.<sup>11</sup> The dataset consists of scientific articles, conference proceedings, and book chapters on Islamic environmental education, all retrieved from the Scopus database. The Scopus database has the advantage of being the largest academic database covering a wide range of publications, making it a primary data source for scientific research<sup>12</sup>. The selected publications cover the years 2015 to 2025.

The document search was conducted using the following criteria: (TITLE-ABS-KEY (environmental Islamic education) OR TITLE-ABS-KEY (environmental education) AND TITLE-ABS-KEY (Islamic education)). This filter ensures that the retrieved documents are highly relevant. Another feature applied in the document search for this study was the selection of the social sciences as the field of study, as it is the field most closely related to education. Regarding language, we selected English as one of the inclusion criteria for document selection. For document types, we selected all types, including journal articles, conference proceedings, review articles, book chapters, and various other relevant documents. The use of all these document types aims to provide a more comprehensive overview of environmental education studies within the context of Islamic education. This study analyzed 103 documents following the PRISMA<sup>13</sup> framework:

---

<sup>11</sup> B. M. Gupta and Sujit Bhattacharya, "Bibliometric Approach towards Mapping the Dynamics of Science and Technology," *DESIDOC Bulletin of Information Technology* 24, no. 1 (January 2004): 3-8, <https://doi.org/10.14429/dbit.24.1.3616>; Nees Jan Van Eck and Ludo Waltman, "Software Survey: VOSviewer, a Computer Program for Bibliometric Mapping," *Scientometrics* 84, no. 2 (August 2010): 523-38, <https://doi.org/10.1007/s11192-009-0146-3>.

<sup>12</sup> Farah Hussan Sahib and Mahani Stapa, "Global Trends of the Common European Framework of Reference: A Bibliometric Analysis," *Review of Education* 10, no. 1 (April 2022), <https://doi.org/10.1002/rev3.3331>.

<sup>13</sup> Matthew J. Page et al., "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews," *BMJ*, March 29, 2021, n71, <https://doi.org/10.1136/bmj.n71>.

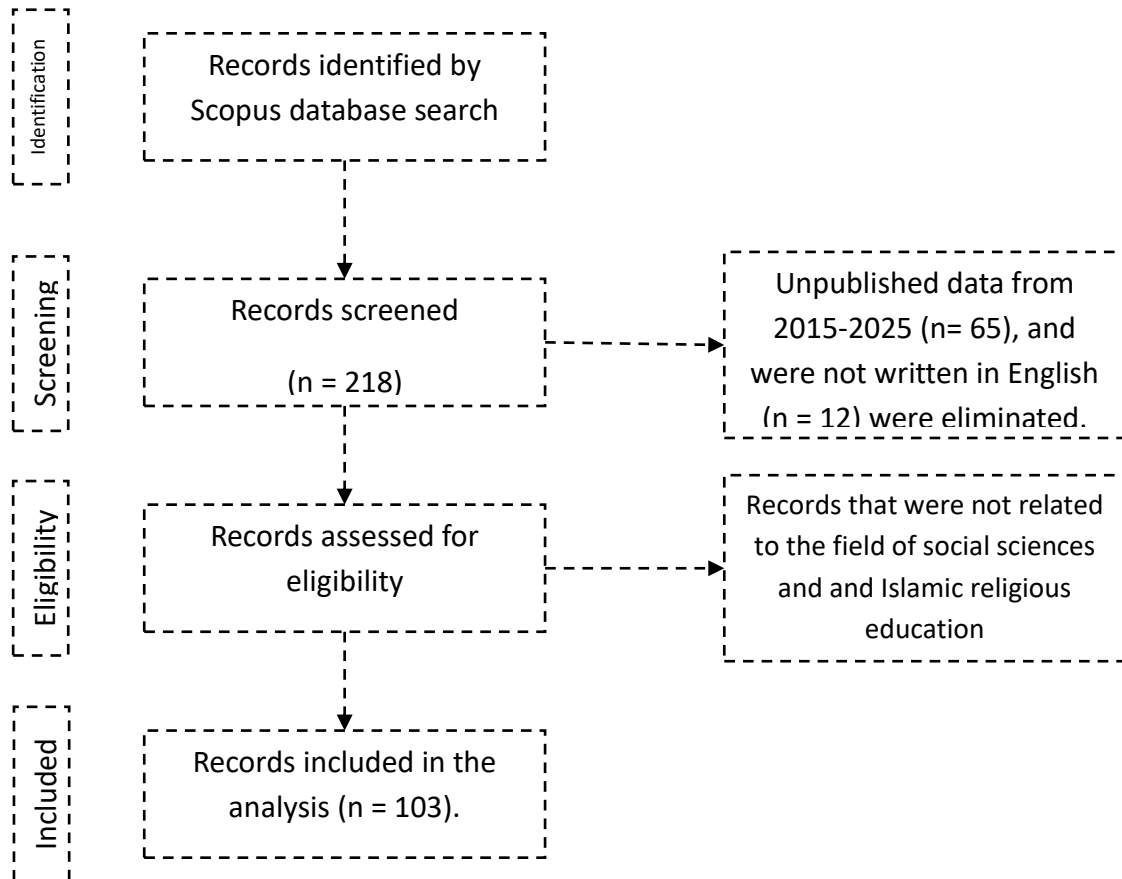
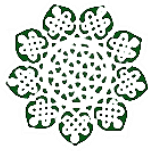
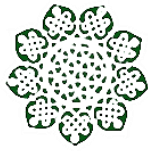


Figure 1. PRISMA Framework

All documents that passed the screening stage and were deemed eligible for this study were subsequently analyzed using VOSViewer. According to Tupan (2016), VOSViewer is an application that maps articles and illustrates the relationships between them through features such as zooming, scrolling, and search mapping, thereby enabling a more in-depth analysis of publication relationships. The VOS Viewer tool facilitates the mapping and visualization of relationships among documents, authors, keywords, and institutions using network visualization techniques.<sup>14</sup> This study utilizes VOS Viewer to map trends in scientific publications and visualize relationships between documents in the field of Islamic Environmental Education.

The minimum occurrence threshold for terms was set at three, meaning

<sup>14</sup> Dwi Fitria Al Husaeni and Asep Bayu Dani Nandiyanto, "Bibliometric Using Vosviewer with Publish or Perish (Using Google Scholar Data): From Step-by-Step Processing for Users to the Practical Examples in the Analysis of Digital Learning Articles in Pre and Post Covid-19 Pandemic," *ASEAN Journal of Science and Engineering* 2, no. 1 (June 2021): 19-46, <https://doi.org/10.17509/ajse.v2i1.37368>; Andrew Kirby, "Exploratory Bibliometrics: Using VOSviewer as a Preliminary Research Tool," *Publications* 11, no. 1 (February 2023): 10, <https://doi.org/10.3390/publications11010010>; Herman Soegoto et al., "A Bibliometric Analysis of Management Bioenergy Research Using Vosviewer Application," *Indonesian Journal of Science and Technology* 7, no. 1 (December 2021): 89-104, <https://doi.org/10.17509/ijost.v7i1.43328>.



that only terms appearing at least three times were included in the mapping. Of the 497 terms identified by the software, only 20 met this criterion and were included in the resulting visual network analysis. Next, keywords were selected manually in the "Verify Selected Terms" section of VOSviewer. Keywords most relevant to the research topic, such as "environmental education," "Islamic education," "eco-pesantren," and others (Figure 2), were selected to ensure that only terms accurately representing the core focus of the study were analyzed. This process ensures alignment between the analysis and the study's emphasis on Islamic environmental education.

## RESULTS AND DISCUSSION

### Visualization of Islamic Environmental Education Topics using Vosviewer

This section presents the results of bibliometric mapping that address the first objective of this study, namely identifying the main thematic clusters and their temporal evolution in research on Islamic Environmental Education. Based on the results of the search using VOSviewer, the co-occurring keyword networks were generated from publications indexed in Scopus and organized into five main clusters (indicated by 5 different colors in the network visualization in Figure 3).

The keyword network visualization generated by VOSviewer (Figure 3) highlights the relative weight and various themes in this research. The size of each node represents the frequency of keyword occurrence, while the number and thickness of links indicate the strength of the relationship between terms and clusters. Cross-colored links reveal connections that span clusters, making it possible to see how environmental, pedagogical, and institutional concepts

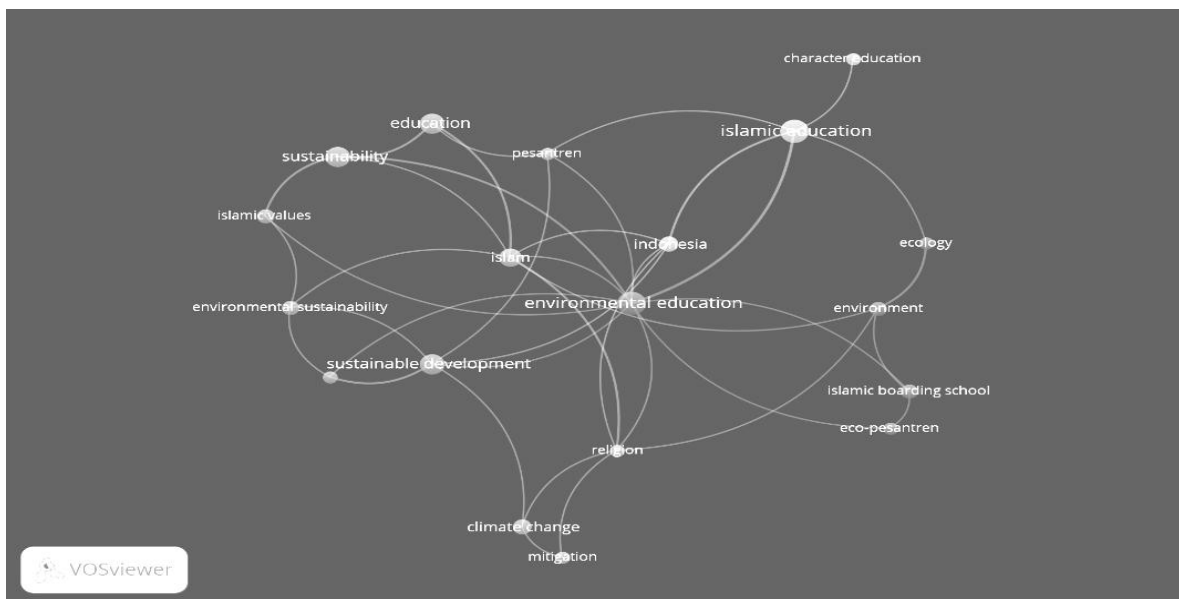


Figure 2. Visualization of the Islamic Environmental Education Research



Network Based on the visualization above, the keyword "environmental education" emerges as a central node connecting several interrelated themes, including Islamic education, sustainable development, religion, and Islam. Groups related to environmental education, sustainability, sustainable development, and religion form a relatively dense region compared to others, indicating that these topics have become focal points in this field.

A quantitative summary of these five clusters, including representative keywords, the number of connected keywords, and total link strength, is presented in Table 1 to provide an overview of the internal structure and relative prominence of each cluster.

Table 1. Summary of the five clusters in Islamic environmental education

Cluster	Main Theme	Link	Tls	Representative Keywords And Notes
1	Implementation of environmental education in Islamic educational institutions	11	14	<i>environmental education, eco-pesantren, Islamic boarding school, ecology, and environment.</i> This cluster highlights the implementation of environmental education in Islamic educational institutions, particularly pesantren, with a focus on ecology and eco-friendly culture.
2	Islam, Education, and Sustainability	7	9	<i>education, Islam, pesantren, and sustainability.</i> This cluster illustrates the relationship between Islamic education and the concept of sustainability, as well as the integration of Islamic values into environmental education.
3	Islamic Values and Sustainable Development	6	7	<i>sustainable development, sustainable development goals, environmental sustainability, and Islamic values.</i> This cluster emphasizes the contribution of Islamic values to sustainable development and global environmental sustainability.
4	Religion and Climate Change	5	8	<i>climate change, mitigation, and religion.</i> This cluster illustrates the connection between religion and the issues of climate change and environmental mitigation as part of humanity's moral and spiritual responsibility.
5	Islamic Education and Environmental Character Education	6	7	<i>Character education, Islamic education, and Indonesia.</i> This cluster highlights research focused on character building and Islamic education as means of fostering environmental awareness in the Indonesian context.



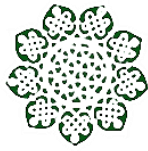
The table above shows that the Vosviewer analysis results reveal a mapping of various main themes in research on Islamic environmental education, which are divided into 5 clusters. The link value indicates the extent of the relationships between keywords. The higher the link value, the more other keywords are connected. Additionally, the total link strength (TLS) value indicates the strength of the relationships between keywords. As shown in the table above, Cluster 1, with the theme of implementing environmental education in Islamic educational institutions, has 11 links and a TLS of 14, indicating that this theme appears quite frequently in the analyzed research. In Cluster 1, keywords such as environmental education, eco-pesantren, Islamic boarding school, ecology, and environment indicate that the research focus is on the environment within Islamic educational institutions. This theme emphasizes how Islamic educational institutions integrate ecological values into the educational system, such as school culture and daily practices.

Cluster 2, with the themes of Islam, education, and sustainability, has a link value of 7 and a TLS of 9. Keywords such as education, Islam, pesantren, and sustainability indicate a connection between Islamic teachings and the concept of sustainable development as an effort to preserve the environment. The primary focus in this cluster is the integration of Islamic values into environmental education as the foundation for fostering sustainability awareness.

The third cluster, themed on Islamic values and sustainable development, has a link value of 6 and a TLS of 7. The main keywords in this network – sustainable development, Sustainable Development Goals (SDGs), environmental sustainability, and Islamic values – indicate that research in this cluster focuses on the contribution of Islamic values to global sustainable development. This theme emphasizes the alignment of Islamic teachings in supporting environmental conservation, ecological ethics, and human responsibility toward nature in accordance with the objectives of the Sustainable Development Goals (SDGs). This integration also contributes positively to human safety and well-being

The fourth cluster, themed “Religion and Climate Change,” has a link value of 5 and a TLS of 8. Keywords emerging in this network – including climate change, mitigation, and religion – indicate that research focuses on the relationship between religion (specifically Islam) as a source of moral values in efforts to minimize the risks, impacts, and losses caused by climate change. In this network, research also highlights how religious teachings can raise public awareness of the global ecological crisis and encourage environmentally friendly behavior.

The fifth cluster, with the theme of Islamic education and environmental character education, has a link value of 6 and a TLS of 7. The keywords that frequently appear in this cluster are character education, Islamic education, and Indonesia. This indicates that the research focus in this cluster relates to strengthening character education based on Islamic values aimed at fostering



environmental awareness. This cluster demonstrates that character education is viewed as a substantive instrument in shaping students' ecological behavior, particularly within the context of Islamic education in Indonesia.

The overlay visualization (Figure 4) adds a temporal dimension by displaying the average publication year for each keyword and cluster. The color gradient allows older topics to be distinguished from newer ones, enabling core themes and current innovation areas to be identified at a glance. In this study, the overlay visualization traces the movement from Islam and the environment as ethical concepts toward the implementation of environmental education in schools or Islamic boarding schools, and then evolves toward global sustainability, the SDGs, and climate change.

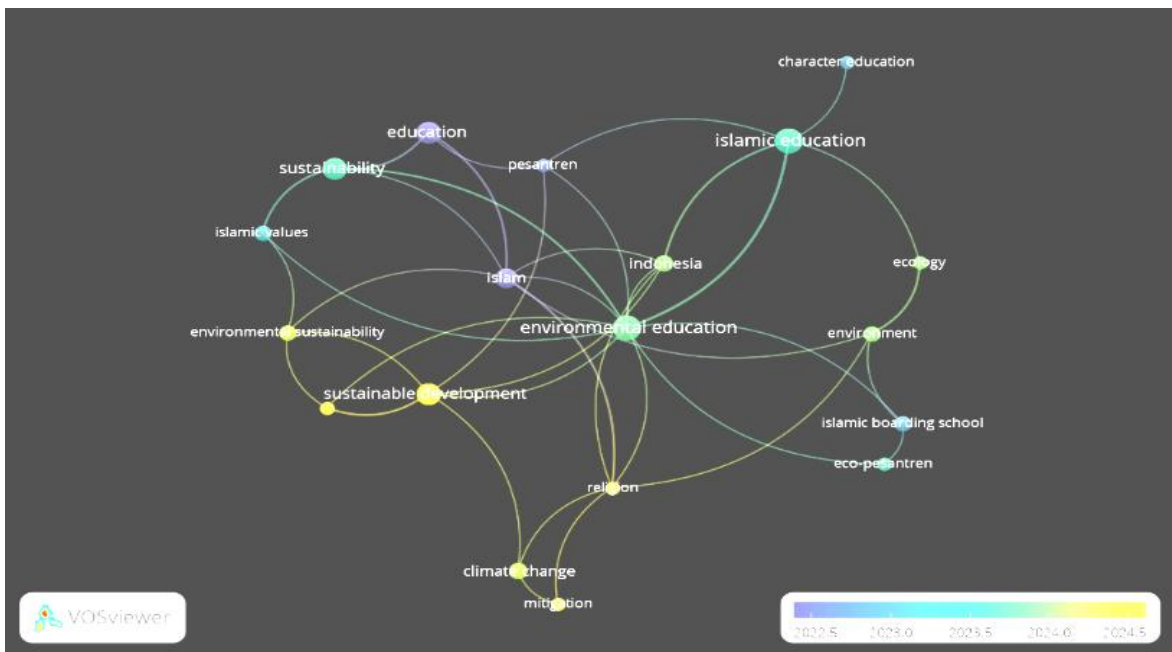


Figure 3. Overlay Visualization

The overlay visualization above shows the development of trends in Islamic environmental education research from conceptual themes toward implementation and sustainability. In the early phase, research focused more on the basic concepts of the relationship between Islam, the environment, and education, as indicated by the purple keywords. Subsequently, research expanded into the realm of environmental education implementation in Islamic educational institutions. The latest themes are indicated by the yellow color, suggesting that recent research emphasizes issues of sustainable development and the role of Islamic education in global sustainability.

The visualization density (Figure 5) complements the perspective of this by displaying areas with high and low concentrations of keywords. Warmer colors correspond to regions with many frequently occurring and closely connected terms, while cooler colors indicate less intensive coverage.



The density map for this study shows that environmental education, Islamic education, and sustainability form the densest zones and confirm their status as the dominant focus of this research.

Overall, this visualization provides a coherent picture of the structure of research on Islamic Environmental Education. The network view maps thematic clusters and the relationships among them, the overlay view shows how topics evolve over time, and the density view highlights the most intensively researched areas. Collectively, these visualizations fulfill the first research objective by identifying the main themes and structural patterns characteristic of Islamic Environmental Education in the analyzed Scopus dataset, and serve as a foundation for trend analysis in the following section.

### **Analysis of Research Trends in Islamic Environmental Education**

Based on the network, overlay, and density visualizations described above, the bibliometric review indicates that trends in Islamic environmental education research have evolved from conceptual themes toward implementation and sustainability. Environmental education serves as a central hub connecting curriculum analysis, the ecological behavior of Muslim students, and Islamic educational organizations, while environmental models and sustainability bridge the themes of behavior, sustainability, and management. Overall, these patterns suggest that the field is gradually shifting from theory-driven reflection to practice-oriented inquiry.

In the initial phase, specifically from late 2022 to early 2023, research on environmental education began with the theoretical foundations of education and Islam. The inclusion of an Islamic perspective and the context of Islamic education indicates that environmental topics have been framed through Islamic values within the educational setting. During this period, the discussion moved beyond general ecological debates and emphasized the conceptual and ethical dimensions of environmental issues in Islamic teachings in relation to global standards.

In the middle period, specifically from mid-2023 to the end of the year, the research began to focus more explicitly on pedagogy and behavior. At this stage, attention shifted from environmental philosophy to structured education in Islamic schools and related institutions. Keywords such as character education, Islamic boarding school, pesantren, eco-pesantren, and ecology indicate that Islamic education is positioned as a strategic medium in building ecological awareness and sustainable behavior. Behavioral concepts such as character education and Islamic education highlight the relationship between responsible environmental actions and the internalization of Islamic principles through education. This period represents a crucial transition, in which environmental education is deliberately used to shape the ecological behavior of Muslim students.

The 2023–2024 period indicates that research increasingly emphasizes the integration of environmental education with Islamic educational institutions



and religious values. The strong connection between *environmental education*, *sustainable development*, and *environmental sustainability* demonstrates that sustainability issues are increasingly understood as part of the moral and spiritual responsibility of the Muslim community. Furthermore, the association with terms like “*ecology*” and “*environment*” indicates that research is not only addressing normative values but is also beginning to highlight concrete environmental conservation practices within an educational context.

In recent times, the emergence of keywords such as “*climate change*” and “*mitigation*” indicates that environmental education is now being directed toward responding to the global environmental crisis. The focus of research is no longer limited to fostering ecological awareness but also extends to climate change mitigation strategies through Islamic education and the strengthening of the role of religious institutions. In this context, Islamic boarding schools (*pesantren*) and Islamic schools are viewed as key actors in fostering an eco-friendly culture through the integration of religious teachings, sustainability education, and daily ecological practices. Furthermore, the relationship between *Indonesia*, *pesantren*, and *Islamic education* indicates that the Indonesian context is a major focus of this research. This suggests that Islamic educational institutions in Indonesia are perceived as having significant potential to support the sustainable development agenda. Thus, this bibliometric map confirms that current research is moving toward strengthening Islamic education-based environmental governance, developing sustainability competencies, and implementing ecological values in social and institutional life in a more practical and measurable manner.

Based on the publication years and the distribution of mapped documents, an analysis of research trends regarding Islamic environmental education reveals that studies in this field still leave several *research gaps* that have not been extensively explored. This situation presents an opportunity for future researchers to develop studies on themes that have been limited in discussion. Indications of these research gaps are evident in the VOSviewer network visualization, particularly through the relatively small node sizes and the weak and distant connections between topics. This suggests that some research themes have not yet been developed intensively and lack strong conceptual integration within the literature on Islamic environmental education.

### **Integration of Islamic Values in Environmental Education**

Islam-based environmental education plays a central role in fostering ecological awareness and a sense of environmental responsibility among students. The integration of Islamic values into the curriculum and practices of environmental education not only enriches ecological knowledge but also instills a moral responsibility toward nature as a trust (*amanah*) from Allah. Core concepts such as *khalifah* (human stewardship of the earth), *amanah* (responsibility), and *mizān* (balance) provide a normative framework for a



holistic approach to environmental awareness.<sup>15</sup> Through *ijtihad* (independent legal reasoning), Muslim scholars have extended these principles to contemporary ecological issues, arguing that Islam offers practical and comprehensive responses to current environmental challenges.<sup>16</sup> The reviewed literature indicates that this integration is expressed not only at the normative level but also through concrete changes in educational practices and daily behavior in schools, Islamic boarding schools, and communities. This, in turn, requires a deep theological and philosophical understanding that is systematically translated into actionable measures on the ground.

Based on 103 reviewed sources—journal articles, conference papers, and book chapters—the conceptual map of Islamic environmental education is shifting from a purely theological and philosophical foundation toward an operational framework for sustainability and prevention. Studies on the ecological theology of the Qur'an and the ethics of forest conservation,<sup>17</sup> the Islamic perspective on sustainability,<sup>18</sup> and the role of the Prophet's Sunnah in supporting sustainable practices,<sup>19</sup> collectively provide a solid normative foundation for ecological engagement. At the same time, research on Islamic ecological theology in climate change mitigation and adaptation<sup>20</sup> highlights the need to translate these principles into educational frameworks that are both normative and practical. Philosophical discussions on education now focus on the Anthropocene curriculum and the ethics of human-nature relations.<sup>21</sup> The *eco-maqāsid* approach combines *eco-linguistics* with Islamic legal philosophy to design more explicit climate communication strategies aligned with Sharia objectives. The concept of "Green Academia" integrates Islamic teachings into future models of sustainable education,<sup>22</sup> offering a

<sup>15</sup> Manna al-Qattan, *Tarikh Al-Tashri' al-Islami (History of Islamic Law)* (Riyadh: Maktabat al-Ma'arif, 1996); Jens Koehrsen, "Muslims and Climate Change: How Islam, Muslim Organizations, and Religious Leaders Influence Climate Change Perceptions and Mitigation Activities," *WIREs Climate Change* 12, no. 3 (2021): e702, <https://doi.org/10.1002/wcc.702>.

<sup>16</sup> Zubair Hasan, *Leading Issues in Islamic Economics and Finance: Critical Evaluations*. (Singapore: Palgrave, 2020); Idllalène Samira, *Rediscovery and Revival in Islamic Environmental Law: Back to the Future of Nature's Trust* (New York: Cambridge University Press, 2021); Eid Allah Shihatah, *Ru'yat al-Din al-Islami Fi al-Hifaz 'a' al-Bi'ah (Vision of the Islamic Religion in Preserving the Environment)* (Cairo: Dar al-ShurĒq, 2001).

<sup>17</sup> Afrizal Nur et al., "Qur'anic Ecotheology and the Ethics of Forest Protection in Indonesia," *Jurnal Studi Ilmu-Ilmu Al-Qur'an Dan Hadis* 26, no. 2 (July 2025): 351–82, <https://doi.org/10.14421/qh.v26i2.6312>.

<sup>18</sup> Labeeb Bsoul et al., "Islam's Perspective on Environmental Sustainability: A Conceptual Analysis," *Social Sciences* 11, no. 6 (May 2022): 228, <https://doi.org/10.3390/socsci11060228>.

<sup>19</sup> Kamal Abdelaal Tamam Abdelaal et al., "Environmental Sustainability in the Prophetic Sunnah," *Edelweiss Applied Science and Technology* 8, no. 6 (November 2024): 5138–44, <https://doi.org/10.55214/25768484.v8i6.3131>.

<sup>20</sup> Abdelaal et al.

<sup>21</sup> Abdelaal et al.

<sup>22</sup> Shahida Shahida, "Green Academia: Integrating Islamic Teachings in Education for a Sustainable Future," *Journal of Islamic Thought and Civilization* 13, no. 2 (December 2023): 86–103, <https://doi.org/10.32350/jitc.132.06>.



theoretical platform to transform practices in schools, Islamic boarding schools, and the broader community.

In the pedagogical realm, the integration of Islamic values into the learning process has proven to support a shift from merely designing learning materials to the deliberate shaping of student behavior. This is evident in efforts to strengthen environmental education from an Islamic perspective,<sup>23</sup> including energy conservation models grounded in Islamic ethics and integrative learning approaches.<sup>24</sup> Religious education in an agrarian context combines agricultural practices with religious instruction to foster students' holistic development.<sup>25</sup> Empirical links between environmental literacy and action competence among students in Islamic junior and senior high schools<sup>26</sup> underscore the importance of humanistic and contextual approaches in religious education, including at the higher education level<sup>27</sup>. Higher levels of responsibility and religiosity have been shown to moderate pro-environmental behavior,<sup>28</sup> and this pattern is also reflected in Islamic Religious Education (PAI) classes in schools.<sup>29</sup> Finally, teachers' beliefs and classroom practices in Islamic elementary schools regarding environmental education<sup>30</sup> are crucial for aligning professional beliefs with teaching programs, thereby complementing curriculum initiatives in Islamic environmental education.

In addition, several studies have examined the integration of environmental education across various subjects and educational levels. For example, an analysis of its relationship with Arabic language instruction in

---

<sup>23</sup> Diah Ayu Setianingrum, Setiyo, and Agus Dwiyanto, "Environmental Education through Islamic Lens: Values and Practices," *E3S Web of Conferences* 482 (2024): 04014, <https://doi.org/10.1051/e3sconf/202448204014>.

<sup>24</sup> Rohmatulloh et al., "Energy-Saving Triangle."

<sup>25</sup> Masturin, "Religious Education in Agricultural Environments: Integrating Islamic Teachings and Agricultural Practices for Holistic Student Development," *Religious Education* 120, no. 1 (January 2025): 58–75, <https://doi.org/10.1080/00344087.2024.2426318>.

<sup>26</sup> Masturin.

<sup>27</sup> I. Mardhiah et al., "Developing Environmental Care Attitudes among College Students through Islamic Education (IRE) Learning with a Humanist-Contextual Approach," *IOP Conference Series: Earth and Environmental Science* 743, no. 1 (May 2021): 012004, <https://doi.org/10.1088/1755-1315/743/1/012004>.

<sup>28</sup> Abida Begum et al., "Impact of Environmental Moral Education on Pro-Environmental Behaviour: Do Psychological Empowerment and Islamic Religiosity Matter?," *International Journal of Environmental Research and Public Health* 18, no. 4 (February 2021): 1604, <https://doi.org/10.3390/ijerph18041604>.

<sup>29</sup> Fua et al., "Development of Environmental Care Attitude of Students through Religion Education Approach in Indonesia."

<sup>30</sup> Rosyadi Br, "Teachers' Belief and Practice in Environmental Education: Evidence from an Indonesian Islamic Primary School," *Education* 3-13, May 15, 2024, 1–13, <https://doi.org/10.1080/03004279.2024.2351553>.



madrasahs and pesantren<sup>31</sup> emphasizes the need for consistency between language education and environmental messages. The development of such curricula in pesantren<sup>32</sup> and the evaluation of PAI content in the Indonesian curriculum<sup>33</sup> further highlight the urgency of a holistic school-based approach to Islam-based environmental education. Textbook analysis reveals how conservation values are conveyed and normalized.<sup>34</sup> Teachers' perspectives on the integration of tauhid<sup>35</sup> and the teaching methods used by PAI teachers to prepare environmentally conscious Muslim students<sup>36</sup> offer concrete pedagogical strategies. At the public school level, integrating environmental programs with Islamic education for sustainable character development demonstrates a partnership model that can be adapted by other schools.<sup>37</sup>

In terms of institutional transformation, developments such as the eco-friendly pesantren model illustrate the evolution of school culture grounded in Qur'anic values. Studies on the implementation of eco-friendly Islamic boarding schools at Dayah Terpadu Inshafuddin in Banda Aceh<sup>38</sup> and on environmental education in Islamic boarding schools<sup>39</sup> reveal how environmental awareness is woven into a religious context. Building on this, eco-friendly Quran memorization initiatives in Malaysia bridge Islamic

<sup>31</sup> Raden Taufiqurrochman, "Linking Environmental Education and Arabic Language Teaching: Curriculum Analysis of Madrasa and Pesantren in Indonesia," *Studia Ecologiae et Bioethicae* 23, no. 2 (March 2025): 73–85, <https://doi.org/10.21697/seb.5845>.

<sup>32</sup> Asma'ul Lutfauziah et al., "Curriculum Development for Environmental Education at an Islamic Boarding School: Research Article," *Journal of Turkish Science Education* 20, no. 3 (October 2023): 490–503, <https://doi.org/10.36681/tused.2023.028>.

<sup>33</sup> Nur Wakhidah and Erman Erman, "Examining Environmental Education Content on Indonesian Islamic Religious Curriculum and Its Implementation in Life," *Cogent Education* 9, no. 1 (December 2022): 2034244, <https://doi.org/10.1080/2331186X.2022.2034244>.

<sup>34</sup> Fatin Nur Marhamah Zabidi, Norshariani Abd Rahman, and Lilia Halim, "Integration of Islamic Values for Environmental Conservation: An Analysis of School Textbooks," *Religions* 12, no. 7 (July 2021): 509, <https://doi.org/10.3390/rel12070509>.

<sup>35</sup> Norshariani Abd Rahman, Fatin Nur Marhamah Zabidi, and Lilia Halim, "Integration of Tauhidic Elements for Environmental Education from the Teachers' Perspectives," *Religions* 11, no. 8 (July 2020): 394, <https://doi.org/10.3390/rel11080394>.

<sup>36</sup> Abd. Aziz Rekan et al., "Instructional Approach of Islamic Education Teachers to Gearing Up Future Muslim Generations with Environmental Education," *Asia Pacific Journal of Educators and Education* 39, no. 2 (December 2024): 249–72, <https://doi.org/10.21315/apjee2024.39.2.13>.

<sup>37</sup> Abdul Malik Karim Amrullah et al., "Integrating Islamic Education with Environmental Programs: Strategies for Sustainable Character Development at SMAN 2 and 7 Malang Indonesia," *The Qualitative Report*, ahead of print, March 6, 2025, <https://doi.org/10.46743/2160-3715/2025.6020>.

<sup>38</sup> S. S. Maulida, C. Nursaniah, and L. H. Sari, "Study of Implementation of the Eco-Pesantren Concept at Dayah Terpadu Inshafuddin, Banda Aceh," *IOP Conference Series: Earth and Environmental Science* 1290, no. 1 (January 2024): 012037, <https://doi.org/10.1088/1755-1315/1290/1/012037>.

<sup>39</sup> Jumardin La Fua et al., "Islamic Education on Formation of Environmental Awareness in Pondok Pesantren Indonesia," *IOP Conference Series: Earth and Environmental Science* 156 (May 2018): 012035, <https://doi.org/10.1088/1755-1315/156/1/012035>.



education and sustainability,<sup>40</sup> supported by IKIM's institutional contributions to Islamic environmental education.<sup>41</sup> At the community level, environmental ethics are promoted through local and cross-cultural practices, as seen in sustainable lifestyles in Malaysia<sup>42</sup> and environmental ethics in Kuwait,<sup>43</sup> while research on the Muslim community in Knoxville, Tennessee,<sup>44</sup> enables cross-cultural comparisons. Furthermore, targeted conservation efforts, such as coral reef conservation in Wakatob,<sup>45</sup> and sustainability initiatives in the Maldives,<sup>46</sup> complement these educational and community-based initiatives.

This development complements ongoing educational initiatives. By shifting the focus to policy and implementation, the intersection of education, communication, and governance underscores the need for strategic support. A review of Islamic green financing through innovation and education<sup>47</sup> suggests a Sharia-compliant framework for funding programs in green schools and boarding institutions. Furthermore, the effectiveness of communication—whether through media, religious rhetoric, or ecolinguistics—must be evaluated to ensure that increased environmental awareness is accompanied by changes in intent and behavior. Institutional policies, including curriculum standards, teacher professional development, school culture, and performance indicators, must align with Qur'anic ethics<sup>48</sup> and relevant global sustainability agendas<sup>49</sup>. Based on these

<sup>40</sup> Abd. Aziz Rekan and Mohd Istajib Mokhtar, "The Development of Eco-Tahfiz In Malaysia: Bridging Islamic Education and Environmental Sustainability," *Ulumuna* 29, no. 1 (June 2025): 1-31, <https://doi.org/10.20414/uji.v29i1.1431>.

<sup>41</sup> Mohd Noor Musa et al., "Islamic Environmental Education: The Experience of the Institute of Islamic Understanding Malaysia (IKIM)," in *Contributions to Management Science*, Part F2529 (Springer Science and Business Media Deutschland GmbH, 2024), 731-41, [https://doi.org/10.1007/978-3-031-48770-5\\_59](https://doi.org/10.1007/978-3-031-48770-5_59).

<sup>42</sup> Mohamad Saifudin Mohamad Saleh, Ali Mehellou, and Bahiyah Omar, "Islamic Environmental Communication Towards Environmentally Sustainable Lifestyles in Malaysia," in *Multi-Stakeholder Contribution in Asian Environmental Communication*, 1st ed., by Mohamad Saifudin Mohamad Saleh, Shaidatul Akma Adi Kasuma, and Huang Miao (London: Routledge, 2024), 79-89, <https://doi.org/10.4324/9781032670508-9>.

<sup>43</sup> Khadija al-Naki, "How Do We Communicate Environmental Ethics? Reflections on Environmental Education from a Kuwaiti Perspective," *International Research in Geographical and Environmental Education* 13, no. 2 (May 2004): 128-42, <https://doi.org/10.1080/09669580408668504>.

<sup>44</sup> Haya Bader Albaker et al., "Knowledge, Attitudes, and Practices on Climate Change in a Muslim Community in Knoxville, Tennessee," *Sustainability* 17, no. 15 (July 2025): 6770, <https://doi.org/10.3390/su17156770>.

<sup>45</sup> Nurdin Karim et al., "Environmental Conservation of Coral Reefs in the Wakatobi Region Based on Islamic Education and Customary Law Approaches," *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 8, no. 3 (August 2024): 1547, <https://doi.org/10.22373/sjhk.v8i3.24067>.

<sup>46</sup> Fathimath Shafeeqa and Aminath Shiyama, "Environment and Sustainability Education in the Maldives Islands," in *Navigating Learning, Culture, and Identity in Island Education*, ed. Giambattista Bufalino (IGI Global, 2025), 83-128, <https://doi.org/10.4018/979-8-3373-1345-0.ch004>.

<sup>47</sup> Aidrina Sofiadin, "Fostering Green Islamic Financing through Innovation and Education," in *Islamic Finance and Sustainability*, 1st ed., by Farhad Taghizadeh-Hesary et al. (London: Routledge, 2025), 27-52, <https://doi.org/10.4324/9781003518617-3>.

<sup>48</sup> Abdelaal et al., "Environmental Sustainability in the Prophetic Sunnah"; Karman Karman, Rosihon Anwar, and Lukman Hakim, "The Qur'anic Learning Based on Islamic Eco-Theology at



insights, future research should prioritize causal evaluations of eco-friendly pesantren and eco-friendly tahfiz initiatives, using experimental or quasi-experimental designs and standardized outcomes such as behavioral indicators and resource usage. The development and validation of competency instruments for Islamic environmental management (covering *maqāṣ id, tauhid, mīzān, and fiqh al-bī'ah*), along with and integration across curricula that are more robust, will support the development of sustainable curricula. Finally, international comparative studies across countries, ecosystems, and social contexts are needed to expand the external validity of the literature, which still focuses predominantly on Southeast Asia

### Gaps and Directions for Further Research

In line with the third objective of this study, this subsection synthesizes the main gaps and outlines directions for further research in Islamic Environmental Education. A bibliometric analysis conducted using VOSviewer indicates that conceptual and normative discussions dominate, while empirical evaluations of educational interventions are relatively rare. Many publications present models, frameworks, or conceptual relationships between Islamic teachings and environmental responsibility; however, few offer substantial evidence regarding their effectiveness in shaping behavior or institutional practices

Temporal analysis supports this trend. Although there is a clear shift from environmental theology to curriculum and institutional implementation, most studies continue to employ descriptive and cross-sectional designs and rely on self-reported data. There is a striking absence of longitudinal, experimental, and mixed-methods research capable of evaluating the causal impact of Islamic Environmental Education programs. Consequently, the field lacks validated instruments to assess competencies in Islamic environmental stewardship and has limited evidence regarding the effectiveness of various program designs across educational contexts. At the curriculum and pedagogy level, the primary challenge is moving beyond general recommendations to integrate environmental themes into Islamic religious education. Future research should focus on the development and evaluation of specific instructional designs, such as lesson plans, project-based activities, and assessment tools that explicitly link Islamic concepts to environmental knowledge, attitudes, and behaviors. Additional studies should investigate how teacher training in Islamic educational institutions can systematically integrate environmental education and how digital technologies can facilitate

---

Pesantren," *Jurnal Pendidikan Islam* 9, no. 2 (December 2023): 169–86, <https://doi.org/10.15575/jpi.v9i2.24933>; Nur et al., "Qur'anic Ecotheology and the Ethics of Forest Protection in Indonesia."

<sup>49</sup> M. Lutfi Mustofa, M. Fauzan Zenrif, and Ahmad Barizi, "Towards an Islamic Ecotheology: Indonesian Muslim Organizations in Climate Mitigation and Adaptation Efforts," *Problemy Ekorożwoju* 20, no. 2 (July 2025): 21–31, <https://doi.org/10.35784/preko.7089>; Rekan and Mokhtar, "The Development of Eco-Tahfiz In Malaysia"; Shafeeqa and Shiyama, "Environment and Sustainability Education in the Maldives Islands"; Shahida, "Green Academia."



the expansion of these initiatives. At the institutional and policy levels, progress in Islamic Environmental Education requires a comparative analysis of religion-based green school models, such as eco-pesantren, with particular attention to governance structures, funding mechanisms, and community partnerships. Empirical research on Sharia-compliant green financing, green waqf, and the application of zakat in an educational context remains limited and requires further investigation.

Overall, the integration of bibliometric analysis in this study indicates that research on Islamic Environmental Education is experiencing increasingly broad and multidimensional development, particularly in the approach to linking Islamic values, environmental education, and sustainable development. Nevertheless, keyword network mapping reveals that some topics still have limited interconnections and have not developed evenly, indicating that there remains open research space. Therefore, future research should prioritize: (1) the development of an Islamic Environmental Education model integrated with sustainability values, climate change mitigation, and environmental governance based on Islamic principles; (2) empirical evaluation of the implementation of programs such as eco-pesantren, eco-schools, and education based on ecological awareness through quantitative, qualitative, or mixed-methods approaches; as well as (3) innovations in institutional policies, curriculum design, strengthening educators' competencies, and sustainability practices capable of supporting the contribution of Islamic educational institutions to the global sustainable development agenda in a more practical, measurable, and socially-ecological transformation-oriented manner.

Although this study has provided a comprehensive overview of published research on Islamic environmental education from 2015 to 2025, it has a limitation in that it relied on only one database for document collection. Consequently, there is a possibility that relevant publications on Islamic environmental education particularly articles in other databases remain unaccounted for. Therefore, future researchers are advised to use a combination of several databases to obtain a broader and more representative scope of the literature.

## CONCLUSION

This study demonstrates that Islamic Environmental Education is a rapidly evolving field of study with close ties to Islamic values, education, and global environmental sustainability issues. Based on a bibliometric analysis of 103 Scopus-indexed documents from 2015–2025 using VOSviewer, it was found that research themes in Islamic Environmental Education are divided into five main clusters: the implementation of environmental education in Islamic educational institutions; Islam and sustainability; Islamic values and sustainable development; religion and climate change; and Islamic-based environmental character education. Among these various themes,



environmental education emerges as the central node connecting concepts such as Islamic education, sustainability, religion, climate change, and sustainable development.

The results of network visualization, overlay, and density analysis indicate that research trends have shifted from conceptual and normative discussions toward practical implementation and the reinforcement of sustainability. In the early phase, research emphasized the theological and ethical foundations of environmental ethics in Islam through concepts such as *khalifah*, *amanah*, and the *mizān*. Subsequently, the research focus expanded to the integration of environmental education in Islamic schools, *pesantren*, and *eco-pesantren* as a means of fostering students' ecological character. In the current period, research attention has increasingly shifted toward issues of sustainable development, climate change mitigation, environmental governance, and the contribution of Islamic educational institutions to the global sustainability agenda.

This study also emphasizes that the integration of Islamic values into environmental education is not merely normative but has evolved into a more practical pedagogical, institutional, and social approach. Islamic education is viewed as having significant potential in fostering ecological awareness, shaping environmentally friendly behavior, and promoting sustainable practices through the strengthening of curricula, school culture, and community-based activities. In this context, Islamic boarding schools, Islamic schools, and Quran memorization institutions are increasingly positioned as strategic in driving social-ecological transformation rooted in Islamic values.

Nevertheless, the results of bibliometric analysis indicate that research on Islamic Environmental Education still leaves a number of research gaps. Several themes still have small node sizes and weak inter-topic relationships, indicating that these studies have not yet developed intensively and lack strong conceptual and methodological integration. Furthermore, most research remains dominated by descriptive and conceptual approaches, while empirical evaluations of the effectiveness of Islamic-based environmental education programs remain relatively limited.

Therefore, future research should focus on developing more operational and measurable models of Islamic Environmental Education, particularly regarding sustainability, climate change mitigation, and environmental governance based on Islamic principles. Furthermore, empirical research using quantitative, qualitative, or mixed-methods approaches is needed to evaluate the effectiveness of programs such as *eco-pesantren*, *eco-schools*, and education based on ecological awareness. Strengthening curriculum design, teacher training, institutional policy innovation, and the development of Sharia-based green financing mechanisms are also crucial aspects to support the contribution of Islamic educational institutions in realizing global sustainable development in a more systematic, practical, and socially and ecologically transformative manner.

**BIBLIOGRAFI**

- Abd Rahman, Norshariani, Fatin Nur Marhamah Zabidi, and Lilia Halim. "Integration of Tauhidic Elements for Environmental Education from the Teachers' Perspectives." *Religions* 11, no. 8 (July 2020): 394. <https://doi.org/10.3390/rel11080394>.
- Abdelaal, Kamal Abdelaal Tamam, Abdulaziz Abdulrahman Aldhamer, Faisal Basim Aljawabrah, and Yassin Mahmoud Abdelqader. "Environmental Sustainability in the Prophetic Sunnah." *Edelweiss Applied Science and Technology* 8, no. 6 (November 2024): 5138-44. <https://doi.org/10.55214/25768484.v8i6.3131>.
- Al Husaeni, Dwi Fitria, and Asep Bayu Dani Nandiyanto. "Bibliometric Using Vosviewer with Publish or Perish (Using Google Scholar Data): From Step-by-Step Processing for Users to the Practical Examples in the Analysis of Digital Learning Articles in Pre and Post Covid-19 Pandemic." *ASEAN Journal of Science and Engineering* 2, no. 1 (June 2021): 19-46. <https://doi.org/10.17509/ajse.v2i1.37368>.
- Albaker, Haya Bader, Kelsey N. Ellis, Jennifer First, Dimitris A. Herrera, and Solange Muñoz. "Knowledge, Attitudes, and Practices on Climate Change in a Muslim Community in Knoxville, Tennessee." *Sustainability* 17, no. 15 (July 2025): 6770. <https://doi.org/10.3390/su17156770>.
- Amrullah, Abdul Malik Karim, Ali Murfi, Ahmad Fauzi, and Basri Basri. "Integrating Islamic Education with Environmental Programs: Strategies for Sustainable Character Development at SMAN 2 and 7 Malang Indonesia." *The Qualitative Report*, ahead of print, March 6, 2025. <https://doi.org/10.46743/2160-3715/2025.6020>.
- Aripin, Ipin Tajul. "Ayat-Ayat Al-Quran Tentang Pemeliharaan Lingkungan." *Ahwaluna | Jurnal Hukum Keluarga Islam* 6, no. 1 (March 2025): 149-64. <https://doi.org/10.70143/ahwalunajurnalhukumkeluargaislam.v6i1.459>.
- Arlina, Arlina, and Didik Santoso. "Model Pengembangan Kecerdasan Spiritual Dalam Pembelajaran Akhlak Di Pesantren Modern Indonesia." *Ta'dib* 23, no. 1 (June 2020): 39. <https://doi.org/10.31958/jt.v23i1.1863>.
- Ayu Setianingrum, Diah, Setiyo, and Agus Dwiyanto. "Environmental Education through Islamic Lens: Values and Practices." *E3S Web of Conferences* 482 (2024): 04014. <https://doi.org/10.1051/e3sconf/202448204014>.
- Balqis Khusnul Khotimah, Fitri, Mukhsin Mukhsin, Ilzam Hubby Dzikrillah Alfani, Muhammad Azmi Auf, and Muhammad Fahmi Shihab. "Comparison of Motivation to Learn Islamic Religious Education in Boarding and Non-Boarding Students in Schools." *EDURELIGIA: Jurnal Pendidikan Agama Islam* 9, no. 1 (June 2025): 1-18. <https://doi.org/10.33650/edureligia.v9i1.10697>.



- Begum, Abida, Liu Jingwei, Maqsood Haider, Muhammad Maroof Ajmal, Salim Khan, and Heesup Han. "Impact of Environmental Moral Education on Pro-Environmental Behaviour: Do Psychological Empowerment and Islamic Religiosity Matter?" *International Journal of Environmental Research and Public Health* 18, no. 4 (February 2021): 1604. <https://doi.org/10.3390/ijerph18041604>.
- Br, Rosyadi. "Teachers' Belief and Practice in Environmental Education: Evidence from an Indonesian Islamic Primary School." *Education 3-13*, May 15, 2024, 1-13. <https://doi.org/10.1080/03004279.2024.2351553>.
- Bsoul, Labeeb, Amani Omer, Lejla Kucukalic, and Ricardo H. Archbold. "Islam's Perspective on Environmental Sustainability: A Conceptual Analysis." *Social Sciences* 11, no. 6 (May 2022): 228. <https://doi.org/10.3390/socsci11060228>.
- Efendi, M. Harja, Mimien Henie Irawati, Fatchur Rochman, and Abdul Gofur. "Environmental Conservation Education by Applying Islamic Values." *Journal of Education* 4, no. 2 (2017).
- El Moussaouy, Abdelaziz, Jamila Abderbi, and Mimoune Daoudi. "Environmental Education in the Teaching and the Learning of Scientific Disciplines in Moroccan High Schools." *International Education Studies* 7, no. 4 (March 2014): p33. <https://doi.org/10.5539/ies.v7n4p33>.
- Fakhruddin, A., A. Suryadi, K. A. Hakam, and E. S. Nurdin. "The Development of Learning Content of Islamic Religious Education (IRE) Courses on Environmental Conservation in Higher Education." *IOP Conference Series: Earth and Environmental Science* 145 (April 2018): 012125. <https://doi.org/10.1088/1755-1315/145/1/012125>.
- Fua, Jl, Is Wekke, Z. Sabara, and Ru Nurlila. "Development of Environmental Care Attitude of Students through Religion Education Approach in Indonesia." *IOP Conference Series: Earth and Environmental Science* 175 (July 2018): 012229. <https://doi.org/10.1088/1755-1315/175/1/012229>.
- Fua, Jumardin La, Ratna Umi Nurlila, Fahmi Gunawan, and Ismail Suardi Wekke. "Islamic Education on Formation of Environmental Awareness in Pondok Pesantren Indonesia." *IOP Conference Series: Earth and Environmental Science* 156 (May 2018): 012035. <https://doi.org/10.1088/1755-1315/156/1/012035>.
- Gupta, B. M., and Sujit Bhattacharya. "Bibliometric Approach towards Mapping the Dynamics of Science and Technology." *DESIDOC Bulletin of Information Technology* 24, no. 1 (January 2004): 3-8. <https://doi.org/10.14429/dbit.24.1.3616>.
- Hasan, Zubair. *Leading Issues in Islamic Economics and Finance: Critical Evaluations*. Singapore: Palgrave, 2020.
- Irawan, Akil, and Acep Nurlaeli. "Implementation of Islamic Religious Education Governance in Forming Environmentally Concerned



- Characters at State High School 5 Karawang." *ENDLESS : International Journal of Future Studies* 4, no. 2 (June 2021): 128–37. <https://doi.org/10.54783/endless.v4i2.71>.
- Karim, Nurdin, La Hadisi, Ramli Ramli, Maesaroh Lubis, and Laode Anhusadar. "Environmental Conservation of Coral Reefs in the Wakatobi Region Based on Islamic Education and Customary Law Approaches." *Samarah: Jurnal Hukum Keluarga Dan Hukum Islam* 8, no. 3 (August 2024): 1547. <https://doi.org/10.22373/sjhk.v8i3.24067>.
- Karman, Karman, Rosihon Anwar, and Lukman Hakim. "The Qur'anic Learning Based on Islamic Eco-Theology at Pesantren." *Jurnal Pendidikan Islam* 9, no. 2 (December 2023): 169–86. <https://doi.org/10.15575/jpi.v9i2.24933>.
- Kirby, Andrew. "Exploratory Bibliometrics: Using VOSviewer as a Preliminary Research Tool." *Publications* 11, no. 1 (February 2023): 10. <https://doi.org/10.3390/publications11010010>.
- Koehrsen, Jens. "Muslims and Climate Change: How Islam, Muslim Organizations, and Religious Leaders Influence Climate Change Perceptions and Mitigation Activities." *WIREs Climate Change* 12, no. 3 (2021): e702. <https://doi.org/10.1002/wcc.702>.
- Lutfauziah, Asma'ul, Mimien Henie Irawati Al-Muhdhar, Suhadi, and Fatchur Rohman. "Curriculum Development for Environmental Education at an Islamic Boarding School: Research Article." *Journal of Turkish Science Education* 20, no. 3 (October 2023): 490–503. <https://doi.org/10.36681/tused.2023.028>.
- Mardhiah, I., Amaliyah, A. Hakam, and A. Hadiyanto. "Developing Environmental Care Attitudes among College Students through Islamic Education (IRE) Learning with a Humanist-Contextual Approach." *IOP Conference Series: Earth and Environmental Science* 743, no. 1 (May 2021): 012004. <https://doi.org/10.1088/1755-1315/743/1/012004>.
- Masturin. "Religious Education in Agricultural Environments: Integrating Islamic Teachings and Agricultural Practices for Holistic Student Development." *Religious Education* 120, no. 1 (January 2025): 58–75. <https://doi.org/10.1080/00344087.2024.2426318>.
- Maulida, S. S., C. Nursaniah, and L. H. Sari. "Study of Implementation of the Eco-Pesantren Concept at Dayah Terpadu Inshafuddin, Banda Aceh." *IOP Conference Series: Earth and Environmental Science* 1290, no. 1 (January 2024): 012037. <https://doi.org/10.1088/1755-1315/1290/1/012037>.
- Mohamad Saleh, Mohamad Saifudin, Ali Mehellou, and Bahiyah Omar. "Islamic Environmental Communication Towards Environmentally Sustainable Lifestyles in Malaysia." In *Multi-Stakeholder Contribution in Asian Environmental Communication*, 1st ed., by Mohamad Saifudin Mohamad Saleh, Shaidatul Akma Adi Kasuma, and Huang Miao, 79–89. London: Routledge, 2024. <https://doi.org/10.4324/9781032670508->



- 9.
- Mohidem, Nur Adibah, and Zailina Hashim. "Integrating Environment with Health: An Islamic Perspective." *Social Sciences* 12, no. 6 (May 2023): 321. <https://doi.org/10.3390/socsci12060321>.
- Mukhsin Mukhsin and Ilzam Hubby Dzikirillah Alfani. "Integrating Islamic Eco-Theology into Religious Education: A New Paradigm for Curriculum Development." *Indonesian Journal of Islamic Religious Education* 3, no. 2 (December 2025): 183–96. <https://doi.org/10.63243/mpr1js26>.
- Musa, Mohd Noor, Mohd Istajib Mokhtar, Abd. Aziz Rekan, and Muhammad Firdaus Zakaria. "Islamic Environmental Education: The Experience of the Institute of Islamic Understanding Malaysia (IKIM)." In *Contributions to Management Science, Part F2529*, 731–41. Springer Science and Business Media Deutschland GmbH, 2024. [https://doi.org/10.1007/978-3-031-48770-5\\_59](https://doi.org/10.1007/978-3-031-48770-5_59).
- Mustofa, M. Lutfi, M. Fauzan Zenrif, and Ahmad Barizi. "Towards an Islamic Ecotheology: Indonesian Muslim Organizations in Climate Mitigation and Adaptation Efforts." *Problemy Ekorozwoju* 20, no. 2 (July 2025): 21–31. <https://doi.org/10.35784/preko.7089>.
- Naki, Khadija al-. "How Do We Communicate Environmental Ethics? Reflections on Environmental Education from a Kuwaiti Perspective." *International Research in Geographical and Environmental Education* 13, no. 2 (May 2004): 128–42. <https://doi.org/10.1080/09669580408668504>.
- Nur, Afrizal, Hayati Bin Husin, Alwizar, and Muhammad Yasir. "Qur'anic Ecotheology and the Ethics of Forest Protection in Indonesia." *Jurnal Studi Ilmu-Ilmu Al-Qur'an Dan Hadis* 26, no. 2 (July 2025): 351–82. <https://doi.org/10.14421/qh.v26i2.6312>.
- Page, Matthew J., Joanne E. McKenzie, Patrick M. Bossuyt, Isabelle Boutron, Tammy C. Hoffmann, Cynthia D. Mulrow, Larissa Shamseer, et al. "The PRISMA 2020 Statement: An Updated Guideline for Reporting Systematic Reviews." *BMJ*, March 29, 2021, n71. <https://doi.org/10.1136/bmj.n71>.
- Purnomo, Joko, Sapja Anantanyu, Haryani Saptaningtyas, and Fachruddin Majeri Mangunjaya. "Prophetic Approach in Environmental Education and Community Empowerment: A Case Study of Sustainable Pesantren Development." *Revista de Gestão Social e Ambiental* 18, no. 8 (April 2024): e06259. <https://doi.org/10.24857/rgsa.v18n8-047>.
- Qattan, Manna al-. *Tarikh Al-Tashri' al-Islami (History of Islamic Law)*. Riyadh: Maktabat al-Ma'arif, 1996.
- Rekan, Abd. Aziz, and Mohd Istajib Mokhtar. "The Development of Eco-Tahfiz In Malaysia: Bridging Islamic Education and Environmental Sustainability." *Ulumuna* 29, no. 1 (June 2025): 1–31. <https://doi.org/10.20414/ujs.v29i1.1431>.



- Rekan, Abd. Aziz, Mohd Istajib Mokhtar, Department of Science and Technology Studies, Faculty of Science, Universiti Malaya, 50603 Kuala Lumpur, Malaysia, Tengku Sarina Aini Tengku Kasim, Islamic Education Program, Academy of Islamic Studies, Universiti Malaya, 50603 Kuala Lumpur, Malaysia, Yusmini Md Yusoff, and Department of Dakwah and Human Development, Academy of Islamic Studies, Universiti Malaya, 50603 Kuala Lumpur, Malaysia. "Instructional Approach of Islamic Education Teachers to Gearing Up Future Muslim Generations with Environmental Education." *Asia Pacific Journal of Educators and Education* 39, no. 2 (December 2024): 249–72. <https://doi.org/10.21315/apjee2024.39.2.13>.
- Rohmatulloh, Rohmatulloh, Aan Hasanah, Lalan Sahlani, and M. Tajudin Zuhri. "Energy-Saving Triangle: Internalizing Islamic Ethical Values on Energy Saving in Integrative Learning." *Religions* 14, no. 10 (October 2023): 1284. <https://doi.org/10.3390/rel14101284>.
- Sahib, Farah Hussan, and Mahani Stapa. "Global Trends of the Common European Framework of Reference: A Bibliometric Analysis." *Review of Education* 10, no. 1 (April 2022). <https://doi.org/10.1002/rev3.3331>.
- Samira, Idllalène. *Rediscovery and Revival in Islamic Environmental Law: Back to the Future of Nature's Trust*. New York: Cambridge University Press, 2021.
- Saprodi, Emtizal, Wanjat Kastolani, and Epon Ningrum. "Integration of Environmental Education in Eco Pesantren Daarut Tauhiid Bandung." *Proceeding ISETH (International Summit on Science, Technology, and Humanity)*, 2019, 713–20. <https://doi.org/10.23917/iseth.1517>.
- Shafeeqa, Fathimath, and Aminath Shiyama. "Environment and Sustainability Education in the Maldives Islands." In *Navigating Learning, Culture, and Identity in Island Education*, edited by Giambattista Bufalino, 83–128. IGI Global, 2025. <https://doi.org/10.4018/979-8-3373-1345-0.ch004>.
- Shahida, Shahida. "Green Academia: Integrating Islamic Teachings in Education for a Sustainable Future." *Journal of Islamic Thought and Civilization* 13, no. 2 (December 2023): 86–103. <https://doi.org/10.32350/jitc.132.06>.
- Shihatah, Eid Allah. *Ru'yat al-Din al-Islami Fi al-Hifaz 'a' al-Bi'ah (Vision of the Islamic Religion in Preserving the Environment)*. Cairo: Dar al-ShurĒq, 2001.
- Soegoto, Herman, Eddy Soeryanto Soegoto, Senny Luckyardi, and Agis Abdi Rafdhi. "A Bibliometric Analysis of Management Bioenergy Research Using Vosviewer Application." *Indonesian Journal of Science and Technology* 7, no. 1 (December 2021): 89–104. <https://doi.org/10.17509/ijost.v7i1.43328>.
- Sofiadin, Aidrina. "Fostering Green Islamic Financing through Innovation and Education." In *Islamic Finance and Sustainability*, 1st ed., by Farhad Taghizadeh-Hesary, Hassanudin Mohd Thas Thaker, M. Ishaq Bhatti,



- and Mohamed Asmy Mohd Thas Thaker, 27–52. London: Routledge, 2025. <https://doi.org/10.4324/9781003518617-3>.
- Syukri, Syukri, Sulaiman Muhammad Amir, Fitriani Fitriani, and Sarmalina Pane. "Integration of Islamic Values with Environmental Ethics in Pesantren Education: A Case Study at Darularafah Raya Pesantren." *Jurnal Pendidikan Islam* 13, no. 1 (June 2024): 1–12. <https://doi.org/10.14421/jpi.2024.131.1-12>.
- Taufiqurrochman, Raden. "Linking Environmental Education and Arabic Language Teaching: Curriculum Analysis of Madrasa and Pesantren in Indonesia." *Studia Ecologiae et Bioethicae* 23, no. 2 (March 2025): 73–85. <https://doi.org/10.21697/seb.5845>.
- Van Eck, Nees Jan, and Ludo Waltman. "Software Survey: VOSviewer, a Computer Program for Bibliometric Mapping." *Scientometrics* 84, no. 2 (August 2010): 523–38. <https://doi.org/10.1007/s11192-009-0146-3>.
- Wakhidah, Nur, and Erman Erman. "Examining Environmental Education Content on Indonesian Islamic Religious Curriculum and Its Implementation in Life." *Cogent Education* 9, no. 1 (December 2022): 2034244. <https://doi.org/10.1080/2331186X.2022.2034244>.
- Yahya, Muhammad Slamet. "Hidden Curriculum Pada Sistem Pendidikan Sekolah Tinggi Agama Islam Negeri (Stain) Purwokerto Tahun 2013." *Jurnal Kependidikan* 1, no. 1 (2013): 123–49. <https://doi.org/10.24090/jk.v1i1.535>.
- Zabidi, Fatin Nur Marhamah, Norshariani Abd Rahman, and Lilia Halim. "Integration of Islamic Values for Environmental Conservation: An Analysis of School Textbooks." *Religions* 12, no. 7 (July 2021): 509. <https://doi.org/10.3390/rel12070509>.