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THE INTEGRATION OF ECO-LITERACY IN TEACHING-LEARNING ACTIVITIES AS AN EFFORT TO REDUCE ENVIRONMENTAL CRISIS

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ABSTRAK: Penelitian ini mengeksplorasi integrasi nilai-nilai *eco-literacy* dalam kerangka kegiatan belajar mengajar, sesuai dengan prinsip-prinsip pemikiran Islam. Sehubungan dengan pentingnya kesadaran dan keberlanjutan lingkungan di era modern saat ini, studi ini mengkaji potensi sinergi antara nilai-nilai Islam dan kesadaran ekologis. Penelitian ini menggunakan desain penelitian kualitatif, dengan menggabungkan tinjauan literatur dari prinsip-prinsip Islam dan studi lingkungan. Melalui pendekatan multidimensi, penelitian ini bertujuan untuk mengintegrasikan nilai-nilai *eco-literacy* ke dalam kegiatan belajar mengajar dalam konteks pendidikan Islam. Studi ini juga menyelidiki tantangan dan peluang yang terkait dengan penerapan pendekatan tersebut dalam lingkungan pendidikan, dengan mempertimbangkan konteks budaya dan tingkat kesadaran lingkungan yang beragam. Hasil penelitian menunjukkan bahwa dengan pemahaman yang komprehensif tentang prinsip-prinsip ekologi yang berakar pada pemikiran Islam, pembelajaran dapat lebih menekankan pada pengembangan individu yang sadar lingkungan, bertanggung jawab, dan etis dengan mengintegrasikan nilai-nilai Islam dalam kehidupan sehari-hari, serta mendorong terwujudnya hubungan harmonis antara manusia dan alam.

Kata Kunci: Aktifitas Pembelajaran, Eco Literasi, Pemikiran Islam

ABSTRACT: This study explores the integration of *eco-literacy* values within the framework of teaching and learning activities, aligning with the principles of Islamic thought. Recognizing the growing importance of environmental awareness and sustainability in today's world, this study delves into the potential synergies between Islamic values and ecological consciousness. It employs a qualitative research design, incorporating



literature reviews from both Islamic principles and environmental studies. Through this multidimensional approach, the research seeks to identify the integration of eco-literacy values into diverse subjects across teaching-learning activities within an Islamic educational framework. The study also investigates the challenges and opportunities associated with implementing such an approach in educational settings, considering cultural contexts and varying levels of environmental awareness. By promoting a comprehensive understanding of ecological principles rooted in Islamic thought, this study envisions contributing to the development of environmentally conscious, responsible, and ethical individuals who integrate Islamic values into their daily lives, fostering a harmonious relationship between humanity and the natural world.

Keywords: Eco-Literacy, Teaching-Learning Activities, Islamic Thought.

BACKGROUND OF STUDY

The growing environmental crisis has underscored the urgent need for comprehensive environmental education that promotes sustainable living practices. This necessity has led to the concept of eco-literacy, which entails understanding ecological principles and applying this knowledge to create sustainable communities¹². As global awareness of environmental issues increases, integrating eco-literacy into educational curricula has become imperative, indeed.

In this context, Islamic education presents a unique opportunity to foster eco-literacy, given the profound environmental ethics embedded in Islamic teachings. The concept of Islam underscores humanity's responsibility to protect and preserve the Earth. The Quran and Hadith provide numerous references to the natural world, emphasizing the importance of maintaining ecological balance and treating all forms of life with respect and care³.

These principles align seamlessly with the goals of eco-literacy, making Islamic education an ideal framework for promoting environmental consciousness. Environmental consciousness refers to the awareness and understanding of environmental issues and the commitment to act in ways that contribute to environmental sustainability⁴. However, it plays a critical role in preserving natural resources, protecting biodiversity, improving human health, generating economic

¹ F Capra, *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability*, 2002.

² Jefirstson Richset Riwukore et al., "Falsafah Science of Fritjof Capra in Handling the Environment Destruction," *American Journal of Engineering and Technology Management* 5, no. 9 (December 2020): 103–115.

³ Abdallah Kahil, "Ecology and Islam," in *Encyclopedia of Psychology and Religion*, ed. David A Leeming (Springer, 2020), 735–739.

⁴ D Archer and S Rahmstorf, *The Climate Crisis: An Introductory Guide to Climate Change* (UK: Cambridge University Press, 2010).



benefits, fulfilling ethical responsibilities, achieving sustainable development, and fostering global cooperation. By cultivating environmental awareness and promoting sustainable practices, we can create a healthier, more equitable, and sustainable world for present and future generations.

Despite the clear alignment between Islamic teachings and eco-literacy, there remains a gap in effectively integrating these values into the teaching-learning process. The urgency of environmental education lies in its role as a response to the global ecological crisis. As environmental degradation accelerates, education that promotes awareness, understanding, and sustainable action becomes essential for shaping a society capable of confronting environmental challenges^{5 6}. In another side, traditional educational systems often prioritize conventional subjects, with limited focus on environmental education. This gap presents a significant challenge, especially in Islamic educational institutions, where the integration of religious and contemporary knowledge is crucial.

The integration of eco-literacy values into Islamic education is not merely about adding environmental content to the curriculum but involves embedding ecological principles into the core of teaching and learning activities. This approach requires a comprehensive understanding of both Islamic thought and environmental science, as well as innovative pedagogical strategies that can effectively convey these concepts to students⁷.

Furthermore, Islamic education, with its rich tradition of environmental ethics, offers a unique framework for promoting eco-literacy. This research, then, seeks to address this gap by exploring effective strategies for integrating eco-literacy values into the teaching-learning activities within Islamic educational frameworks, identifying effective strategies and addressing challenges. By examining the intersections between Islamic environmental ethics and contemporary ecological knowledge, this study aims to develop a model that not only enhances students' understanding of ecological principles but also instills a sense of responsibility and ethical conduct towards the environment, grounded in Islamic values.

Research indicates that experiential learning, which involves hands-on activities and real-world problem-solving, is effective in promoting eco-literacy. It is related to the core of learning as the process whereby knowledge is created

⁵ J A Palmer, *Environmental Education in the 21st Century: Theory, Practice, Progress, and Promise* (Routledge, 1998).

⁶ Hana Yunansah and Yusuf Tri Herlambang, "Pendidikan Berbasis Ekopedagogik Dalam Menumbuhkan Kesadaran Ekologis Dan Mengembangkan Karakter Siswa Sekolah Dasar," *Eduhumaniora: Jurnal Pendidikan Dasar* 9, no. 1 (2017): 27-34.

⁷ Imron Rossidy et al., "Concept of Islamic Integrated Education and Its Implementation at Ar-Rohmah Educational Institute Malang," *Didaktika Religia: Journal of Islamic Education* 11, no. 1 (June 2023): 61-84.



through the transformation of experience ⁸⁹. In the context of Islamic education, experiential learning can be coupled with the study of relevant Quranic verses and Hadith to provide a holistic understanding of environmental stewardship. Furthermore, inquiry-based and project-based learning approaches can encourage students to explore environmental issues and develop sustainable solutions, thereby fostering critical thinking and a deeper understanding of ecological principles [Click or tap here to enter text.](#)¹⁰

The outcomes of this research hold the potential to contribute significantly to the field of environmental education within Islamic contexts. By fostering an environmentally conscious and ethically responsible generation, Islamic educational institutions can play a pivotal role in addressing global environmental challenges. However, the integration of eco-literacy values into Islamic education has the potential to address the gap between religious and environmental education ¹¹. By promoting a comprehensive understanding of ecological principles rooted in Islamic thought, this approach can contribute to the development of environmentally conscious, responsible, and ethical individuals. These individuals can integrate Islamic values into their daily lives, fostering a harmonious relationship between humanity and the natural world. Furthermore, this study aims to provide practical insights and recommendations for educators and policymakers, enabling them to implement eco-literacy initiatives effectively and sustainably.

In short, the integration of eco-literacy values into teaching-learning activities as an implementation of Islamic thought represents a critical step towards achieving sustainable development and ecological balance. By leveraging the rich environmental ethics inherent in Islamic teachings, this research aspires to promote a holistic approach to environmental education that can inspire positive change and foster a harmonious relationship between humanity and the natural world.

METHOD

This study employs a qualitative research design to explore the integration of eco-literacy values into teaching-learning activities within the framework of Islamic thought. A qualitative approach is chosen because it allows for an in-depth

⁸ Constantin Bratianu, "How the Theory of Knowledge Fields and Knowledge Dynamics Is Shaping Spiritual Knowledge and Wisdom," *Spirituality and knowledge dynamics: New perspectives for knowledge management and knowledge strategies* (2024): 7-26.

⁹ D.A Kolb, *Experiential Learning: Experience as the Source of Learning and Development* (Pearson Education, 2015).

¹⁰ (Sayuti et al., 2020).

¹¹ S Kapatan Inda Robby and M Karmilah, "Building Sustainable Character through Community-Based Environmental Education," *International Journal of Integrative Sciences* 2, no. 11 (November 2023): 1833-1842.



understanding of the processes, experiences, and perceptions of educators and students regarding eco-literacy and its alignment with Islamic principles¹². All data is collected through literature review unraveling comprehensive literature review of existing research on eco-literacy, Islamic environmental ethics, and educational practices involving sources include academic journals, books, conference proceedings, and credible online databases. Afterwards, data analysis is taken under content analysis by systematically analyzing curricular documents and educational materials to assess the extent and manner of eco-literacy integration and identification of key concepts, terms, and references to Islamic environmental ethics, as well.

RESULT AND FINDING

Eco-literacy can be defined as the ability to understand and appreciate the interconnectedness of human systems with natural systems, and to apply this understanding in order to make informed decisions that promote environmental sustainability¹³. It goes beyond mere knowledge about ecological concepts to encompass a holistic understanding of environmental issues and the ability to critically analyze and address them.

Eco-literacy emphasizes the importance of ecological awareness, ethical responsibility, and active engagement in environmental stewardship. It involves not only understanding ecological principles but also recognizing the socio-economic and cultural dimensions of environmental challenges¹⁴. There are three main components comprised in eco-literacy;

1. *Knowledge*

This component focuses on acquiring factual information about ecosystems, biodiversity, natural resources, climate, pollution, and other environmental issues. It includes understanding the principles of ecology, the impacts of human activities on the environment, and the interconnectedness of ecological systems.

2. *Skills*

Eco-literacy also involves developing practical skills that enable individuals to interact with the environment responsibly and effectively. These skills include

¹² R.C Bogdan and S.K Biklen, *Qualitative Research for Education: An Introduction to Theories and Methods*. (Pearson Education, 2007).

¹³ Z Sardar and M Sardar, *The Greening of Islam: Perspectives on Islam, Nature, and the Environment* (Bloomsbury Academic, 2018).

¹⁴ H. S Ibrahim and A Salama, "Integrating Eco-Literacy into Islamic Education: An Analysis of Opportunities and Challenges," *Journal of Islamic Studies and Culture* 9, no. 2 (2021): 11-25.



critical thinking, problem-solving, environmental monitoring, sustainable practices, and communication skills necessary for advocacy and collaboration.

3. *Attitudes*

Attitudinal aspects of eco-literacy focus on fostering values, attitudes, and ethical considerations that prioritize environmental sustainability and stewardship. It involves developing a sense of responsibility, empathy towards nature, and a commitment to taking action to protect the environment.

Understanding eco-literacy is crucial in contemporary education because it equips individuals with the knowledge, skills, and attitudes necessary to address complex environmental challenges facing society. By promoting eco-literacy, educators can empower students to become environmentally responsible citizens who are capable of making informed decisions and advocating for sustainable practices in their communities.

In the context of integrating eco-literacy with Islamic thought, it becomes particularly significant as it aligns with the Islamic principle of stewardship (*Khalifah*) over the Earth. It does not only enhance ecological awareness but also reinforces ethical values and spiritual connections to nature, thereby fostering a deeper appreciation for environmental conservation rooted in religious teachings.

Overall, eco-literacy plays a pivotal role in shaping a generation of environmentally conscious individuals who are prepared to contribute positively towards achieving global sustainability goals and preserving the planet for future generations.

Islamic Perspective on Environmental Stewardship

Islamic perspective on environmental stewardship emphasizes the importance of responsible custodianship over the Earth, grounded in religious teachings and ethical principles. This perspective derives from core Islamic beliefs and practices, influencing attitudes and behaviors towards nature and the environment. Furthermore, Islamic teachings emphasize the importance of environmental stewardship, highlighting the responsibility of humans to care for the Earth. The concept of stewardship is central to Islamic environmental ethics, encapsulating the duty of Muslims to protect and preserve the environment.

Related to environmental perseverance in Islamic thoughts, Muslims believe that humans are stewards of the Earth, entrusted by Allah to care for and protect His creation. This responsibility entails preserving the universe, using resources wisely, avoiding waste, and ensuring sustainability for future generations. Islam teaches the interconnectedness and interdependence of all elements of creation. This holistic view encourages respect for all living beings and emphasizes harmony between humans, animals, plants, and the environment.



Therefore, all humans are surely responsible for the sustainability of pristine and well-preserved environment as part of the universe. The core point of this concept is about the ability and consistency to keep every element in balance. This concept of balance is central in Islamic teachings, indeed. Muslims are urged to avoid excess and maintain equilibrium in their use of natural resources, ensuring preservation and sustainability.

Preservation of the environment is seen as a religious duty. Prophetic traditions (Hadith) emphasize planting trees, avoiding pollution, and protecting wildlife as acts of worship and moral obligation.

Numerous environmental issues, including protecting natural resources, reclaiming land, and keeping the environment clean, were covered in great detail in the prophetic traditions and teachings. Since Prophet Muhammad prohibited extravagant consumption or any other kind of luxury, criticism of overconsumption serves to promote sustainable behavior. He advocated for moderation in all facets of life, setting an example, and the Qur'an highlights this norms and values as to be implemented in real life ¹⁵. By emphasizing these lessons, the vast majority of Muslims around the world may become more conscious of and receptive to environmental sustainability as a fundamental code of conduct.

The fundamental components of nature – earth, water, fire, woods, and light – belong to all living beings, not just humans, according to Islamic teachings. Islam has placed a strong emphasis on the value of conserving the natural world and its resources. According to Samira Idllalène and other academics, Islam can offer workable and all-encompassing answers to the numerous environmental problems facing humanity today if Muslim scholars apply *ijtihad*, or independent legal reasoning, as a concept to handle contemporary difficulties like environmental crises ^{16 17 18}.

Muslims believe they will be held accountable for their actions on Earth. This belief reinforces the ethical imperative to act responsibly towards the environment, ensuring that actions do not harm future generations or violate the rights of other creatures.

The Concept of Eco-Literacy

Eco-literacy emerged as a concept in response to the growing recognition of the environmental crisis and the need for a more sustainable relationship between humans and the natural world. According to David W. Orr, a pioneer in the field of

¹⁵ Manna Khalil Qattan, *Studi Ilmu-Ilmu Al-Qur'an* (Bogor: Pustaka Litera Antar Nusa, 1996).

¹⁶ Samira Idllalene, *Rediscovery and Revival in Islamic Environmental Law: Back to the Future of Nature's Trust* (Cambridge University Press, 2021).

¹⁷ H Shihatah, *The Philosophy of Islamic Education and Its Role in Preparing Future Generations* (Cairo: Dar Al-Fikr Al-Arabi, 2001).

¹⁸ Gabriel Ignatow, "Theories of Embodied Knowledge: New Directions for Cultural and Cognitive Sociology," *Journal for the Theory of Social Behaviour* 37 (June 2007): 115-135.



ecological literacy, eco-literacy involves "the ability to understand the natural systems that make life on earth possible" [Click or tap here to enter text.](#). This includes knowledge of ecological principles, such as energy flows, nutrient cycles, and the interdependence of living organisms.

Fritjof Capra, another leading advocate of eco-literacy, emphasizes that eco-literate individuals possess "the knowledge necessary to understand the basic principles of ecology, the ability to think systemically, and the capacity to perceive the world as an interconnected whole" ¹⁹. Capra argues that ecological literacy is essential for addressing the complex environmental challenges of our time, as it equips individuals with the tools to analyze and solve environmental problems.

Eco-literacy, or ecological literacy, refers to the ability to comprehend and apply the basic principles of ecology to create sustainable human communities. It is more than just environmental awareness; it involves a deep understanding of the natural systems that sustain life, the recognition of the interdependence of all living things, and the knowledge necessary to make informed decisions that do not harm the environment. As David Orr ²⁰describes, eco-literacy is the "ability to understand the natural systems that make life on Earth possible." At its core, eco-literacy encompasses several key components:

a. Ecological Knowledge

It includes an understanding of key ecological concepts such as energy flows, nutrient cycles, ecosystems, biodiversity, and the interconnections between different forms of life. It also involves recognizing the limits of natural resources and the consequences of human actions on the environment.

b. Systems Thinking

Eco-literacy promotes a holistic view of the world, where individuals understand that ecosystems are complex systems made up of interconnected parts. Systems thinking enables people to see the bigger picture and understand how their actions can have far-reaching impacts on the environment.

c. Sustainability

An eco-literate individual is committed to living in a way that supports the long-term health and vitality of the Earth's ecosystems. This involves adopting practices that reduce environmental harm, conserve resources, and promote social and ecological justice.

d. Ethical Responsibility: Eco-literacy also includes a moral dimension, where individuals recognize their responsibility to protect and preserve the environment for future generations. This ethical responsibility is grounded in the

¹⁹ Fellyanus Habaora et al., "Science Philosophy of Ecology by Fritjof Capra, and Its Relevance with Local Wisdom," *Jurnal Kebudayaan* 15 (July 2020): 41-51.

²⁰ *Ecological Literacy: Education and the Transition to a Postmodern World*.



understanding that humans are part of the natural world and have a duty to care for it.

Eco-literacy is a crucial framework for understanding and addressing the environmental challenges of our time. It combines ecological knowledge, systems thinking, ethical responsibility, and practical skills to promote sustainability and social justice. Developing eco-literacy through education, experiential learning, and community engagement is essential for creating a sustainable future and empowering individuals to live in harmony with the natural world. As the challenges facing our planet continue to grow, the need for eco-literate individuals who can think critically and act responsibly becomes increasingly urgent.

The Importance of Integrating Eco-Literacy in Education

Eco-literacy, also known as ecological literacy, refers to the knowledge, skills, and attitudes necessary to understand the natural world and the impact of human activities on ecosystems. It encompasses a deep awareness of ecological principles and a commitment to sustainable living. Integrating eco-literacy into education is crucial for several reasons:

a. Addressing Environmental Challenges

The world is facing unprecedented environmental challenges, including climate change, biodiversity loss, pollution, and resource depletion. These issues are exacerbated by unsustainable human practices, such as deforestation, overconsumption, and the reliance on fossil fuels. However, education plays a pivotal role in equipping individuals with the knowledge and skills needed to address these challenges and transition towards more sustainable societies.

By integrating eco-literacy into the curriculum, educators can raise awareness of environmental issues and inspire students to take action. This is particularly important for young people, who will inherit the environmental legacy of previous generations. As Hassan ²¹ emphasizes, "Education is the most powerful tool to shape the minds and attitudes of the young generation and to instill in them a sense of responsibility towards the environment."

b. Fostering Systems Thinking

Eco-literacy encourages systems thinking, which is the ability to understand complex systems and their interrelationships. Systems thinking is essential for addressing environmental challenges, as it allows individuals to see the connections between different components of the natural world and recognize the consequences of human actions. For example, understanding the impact of industrial agriculture on soil health, water quality, and biodiversity requires a systems thinking approach.

²¹ *Islam and Sustainable Development: New Worldviews* (Routledge, 2017).



According to Capra ²², "The key to understanding ecosystems is to think in terms of relationships, connectedness, and context." By fostering systems thinking, eco-literacy helps students develop a holistic understanding of environmental issues and the ability to identify sustainable solutions.

c. Promoting Sustainable Lifestyles

Eco-literacy is not just about acquiring knowledge; it also involves cultivating attitudes and behaviors that support sustainable living. This includes adopting practices that reduce environmental impact, such as conserving energy, minimizing waste, and supporting sustainable agriculture. Eco-literate individuals are more likely to make informed choices that contribute to the well-being of the planet.

Orr ²³ argues that education should not only impart knowledge but also "shape the attitudes, values, and skills that are necessary for living in harmony with the natural world." By integrating eco-literacy into teaching-learning activities, educators can encourage students to adopt sustainable lifestyles and become advocates for environmental stewardship.

d. Promoting Social and Ecological Justice

Eco-literacy is also closely linked to social and ecological justice. Understanding the ecological impacts of human activities can reveal the ways in which environmental degradation disproportionately affects marginalized communities. For example, low-income communities and communities of color often bear the brunt of pollution, hazardous waste, and climate change impacts. Eco-literate individuals recognize these injustices and are motivated to advocate for policies and practices that promote equity and justice.

As Fritjof Capra (2002) argues, "Ecological literacy is not just about knowing facts and figures about the environment; it is about understanding the deep interconnections between the ecological, economic, social, and cultural dimensions of sustainability." This understanding can inspire actions that address both environmental and social issues, such as supporting fair trade, opposing environmental racism, and promoting community-based resource management.

Strategies for Integrating Eco-Literacy in Teaching-Learning Activities

To integrate Eco-Literacy in teaching-learning activities, there are various strategies that educators can use to integrate the values into pedagogical activities:

a. Curriculum Integration

One of the most effective ways to incorporate eco-literacy into education is by integrating it across the curriculum. This means embedding ecological concepts

²² *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability.* .

²³ *Ecological Literacy: Education and the Transition to a Postmodern World.*



and sustainability themes into various subjects, such as science, social studies, literature, and art. As Sterling ²⁴ mentioned that teachers also can incorporate lessons on ecosystems, energy cycles, and climate change into biology and chemistry courses. Students can engage in hands-on activities, such as water quality testing, plant growth experiments, and renewable energy projects, to deepen their understanding of ecological principles.

Interdisciplinary approaches are particularly effective, as they help students see the connections between ecological concepts and other areas of knowledge. For instance, a project on sustainable food systems might combine lessons from biology, economics, and ethics, encouraging students to think holistically about the issue.

To implementing in Social Studies, educators can explore the relationship between human societies and the environment by examining topics such as land use, resource management, and environmental justice. Discussions on the impact of industrialization, urbanization, and globalization on ecosystems can help students understand the historical and social context of environmental issues.

In literature classes, teachers can include readings that explore themes of nature, environmental ethics, and sustainability. Texts such as Henry David Thoreau's "Walden" or Rachel Carson's "Silent Spring" ²⁵ can provoke thoughtful discussions on humanity's relationship with nature. Meanwhile in art classes, educators can encourage students to create projects that reflect environmental themes, such as sculptures made from recycled materials, paintings that depict natural landscapes, or multimedia installations that highlight environmental issues. By integrating eco-literacy across the curriculum, educators can create interdisciplinary connections that enhance students' understanding of ecological principles and their relevance to various fields of study.

b. Experiential Learning

Experiential learning is a key strategy for developing eco-literacy. By engaging directly with the natural world, learners can develop a deeper understanding of ecological principles and a personal connection to the environment. Experiential learning, or learning through direct experience, is a powerful way to foster eco-literacy. Activities such as nature walks, gardening, wildlife observation, and environmental monitoring provide hands-on experiences that reinforce ecological concepts. Furthermore, field trips, outdoor education, and community projects provide students with opportunities to engage with the natural world and apply their knowledge in real-world contexts.

For example, schools can incorporate outdoor education programs that involve activities such as gardening, composting, and wildlife monitoring. These hands-

²⁴ *Learning and Sustainability in a Dangerous World* (Newcastle: Agenda Publishing, 2024).

²⁵ *Silent Spring* (NY: Houghton Mifflin, 1962).



on experiences help students develop practical skills and a sense of responsibility for the environment. However, learning experiences involving real experience gives students a deeper understanding about the concepts of living in in such harmonious existence ²⁶. For community projects, the experience of collaborating with local organizations on community projects, such as river cleanups, habitat restoration, or urban gardening, can allow students to contribute to environmental conservation efforts. These projects also foster a sense of civic engagement and social responsibility. However, experiential learning not only reinforces eco-literacy concepts but also helps students develop a personal connection to the environment, which is essential for cultivating a lifelong commitment to sustainability.

c. Place-Based Education

Place-based education is an approach that emphasizes learning about the local environment and community. It encourages students to explore the natural and cultural heritage of their own region and understand the environmental issues that affect their local area. Place-based education fosters a sense of place and belonging, which is crucial for developing eco-literate citizens who are invested in the well-being of their communities.

According to Sobel ²⁷, "Place-based education immerses students in local heritage, culture, and landscapes, providing a framework for understanding the world through the lens of their own place." By focusing on local environmental issues, students can develop a deeper understanding of ecological principles and how they apply to their own lives. By connecting learning to the local environment, place-based education makes eco-literacy relevant and meaningful to students' everyday experiences.

d. Inquiry-Based Learning

Inquiry-based learning is an approach that encourages students to ask questions, conduct research, and explore solutions to environmental problems. This method fosters critical thinking, creativity, and problem-solving skills, which are essential for addressing complex environmental challenges. Inquiry-based learning can be applied to eco-literacy by allowing students to investigate topics such as the effects of pollution, the potential of renewable energy sources in community, the impact of climate change on agriculture and food security and the role of indigenous knowledge in sustainable resource management. By engaging in inquiry-based learning, students take ownership of their learning

²⁶ G.A Smith and D Sobel, *Place- and Community-Based Education in Schools* (Routledge, 2010).

²⁷ *Place-Based Education: Connecting Classroom and Community* (Great Barrington, MA: Orion Society, 2004).



process and develop a deeper understanding of ecological concepts. Capra²⁸ in his book emphasized that this approach also encourages them to think critically about environmental issues and consider multiple perspectives when evaluating solutions.

Challenges and Solutions in Integrating Eco-Literacy as Implementation of Islamic Thought

Integrating eco-literacy values into teaching-learning activities, particularly within the framework of Islamic thought, presents both unique challenges and opportunities. The concept of eco-literacy, which emphasizes understanding the natural world and fostering sustainable living, aligns deeply with Islamic principles of stewardship (*khalifah*), balance (*mizan*), and respect for creation (*amanah*). However, translating these values into practical educational strategies can be complex. There are several key challenges faced in this integration process and propose solutions that educators and institutions can implement to overcome these obstacles.

Challenges in Integrating Eco-Literacy Curriculum Constraints

One of the primary challenges in integrating eco-literacy within Islamic education is the rigid structure of traditional curricula. Many Islamic schools prioritize religious studies, often focusing on the memorization of texts and traditional interpretations, leaving little room for interdisciplinary learning that incorporates environmental education. This compartmentalization of subjects can hinder the holistic approach needed to effectively integrate eco-literacy.

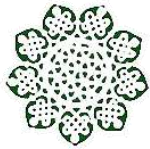
Moreover, the existing curriculum may not include or emphasize the environmental aspects of Islamic teachings, despite their presence in the Quran and Hadith. The lack of resources, textbooks, and teaching materials that explicitly connect Islamic teachings with ecological concepts further exacerbates this issue.

Limited Teacher Training and Awareness

Another significant challenge is the limited awareness and training among teachers regarding both eco-literacy and its connections to Islamic thought. Many educators may not have the necessary background in environmental science or may not fully understand how to relate these concepts to Islamic teachings. This gap in knowledge can result in a lack of confidence or reluctance to incorporate eco-literacy into the classroom.

Furthermore, teachers may not have access to professional development opportunities that focus on integrating eco-literacy into Islamic education. Without

²⁸ *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability.* .



proper training, educators might find it challenging to develop and deliver lessons that effectively combine ecological principles with Islamic values.

Cultural and Societal Attitudes

Cultural and societal attitudes towards environmental issues can also pose challenges. In some communities, there may be a lack of urgency or interest in environmental sustainability, often due to economic pressures, misinformation, or differing priorities⁽²⁹⁾. Additionally, some might view environmental concerns as secondary to more immediate social or economic issues.

These attitudes can influence both students and educators, making it difficult to foster a sense of importance around eco-literacy. When environmental stewardship is not culturally emphasized, it becomes harder to motivate students and communities to engage with eco-literacy initiatives.

Resource Limitations

Islamic schools, especially those in under-resourced areas, may face significant limitations in terms of resources needed to implement eco-literacy programs. This includes a lack of access to natural environments for outdoor learning, insufficient funding for materials and activities, and the absence of infrastructure to support sustainable practices within the school itself. In many cases, schools may struggle to balance the need for environmental education with other pressing needs, such as improving basic literacy and numeracy, especially in regions where educational resources are already stretched thin.

Integration into Traditional Islamic Studies

Integrating eco-literacy into traditional Islamic studies presents a unique challenge. Islamic studies often focus on theology, jurisprudence, and spiritual development, areas that might not explicitly address environmental issues. Finding ways to naturally incorporate eco-literacy into these subjects without diluting their religious significance can be difficult.

Moreover, some educators may be hesitant to introduce environmental topics into religious studies, fearing that it may be seen as a distraction from core religious teachings. This challenge requires a sensitive approach that respects the integrity of Islamic studies while demonstrating the relevance of environmental stewardship as a religious duty.

Solutions for Effective Integration of Eco-Literacy

Curriculum Development and Reform

To address the challenge of curriculum constraints, there needs to be a concerted effort to develop and reform educational curricula that integrate eco-literacy with Islamic teachings. This involves creating interdisciplinary lesson plans and resources that highlight the environmental dimensions of Islamic thought.

²⁹ Sterling, *Learning and Sustainability in a Dangerous World*.



For example, the concept of *khalifah* (stewardship) can be incorporated into science lessons on ecosystems, while *mizan* (balance) can be linked to discussions on sustainability in social studies. Developing textbooks and educational materials that explicitly connect Quranic verses and Hadiths to ecological concepts can provide teachers with the tools they need to teach eco-literacy within an Islamic framework.

Collaboration between Islamic scholars, educators, and environmental experts is crucial in this process. By working together, they can create a curriculum that respects the religious focus of Islamic education while incorporating essential ecological knowledge.

Teacher Training and Professional Development

Addressing the gap in teacher training requires targeted professional development programs that equip educators with the knowledge and skills to teach eco-literacy effectively. These programs should focus on both ecological principles and their connections to Islamic teachings, providing teachers with a robust understanding of how to integrate these concepts in the classroom.

Workshops, seminars, and online courses can be developed to train teachers in eco-literacy and Islamic environmental ethics. These training sessions should also include practical strategies for incorporating outdoor learning, experiential activities, and interdisciplinary projects into their teaching.

In addition, creating networks of educators who are passionate about eco-literacy can foster a supportive community where teachers can share resources, ideas, and best practices. This peer support can help sustain eco-literacy initiatives and encourage continuous learning among teachers.

Promoting Cultural and Societal Engagement

To overcome cultural and societal barriers, it is essential to raise awareness about the importance of eco-literacy through community engagement and public education campaigns. Schools can take the lead by organizing events, workshops, and discussions that involve not just students but also parents, community leaders, and religious figures.

Here, schools can collaborate with local mosques to deliver sermons and lectures on the environmental teachings of Islam, emphasizing the religious obligation to protect the environment. By framing environmental stewardship as a core Islamic value, these efforts can help shift cultural attitudes and inspire greater community involvement in eco-literacy initiatives.

Furthermore, integrating eco-literacy into extracurricular activities, such as environmental clubs or service projects, can provide students with practical experiences that reinforce the importance of sustainability. These activities can also serve as a bridge between the school and the wider community, fostering a culture of environmental awareness and responsibility.



Maximizing Available Resources

Even with limited resources, schools can find creative ways to integrate eco-literacy into their teaching. For example, urban schools can utilize small gardens, rooftop spaces, or indoor plants to teach students about ecosystems, plant biology, and sustainable agriculture. Schools can also leverage partnerships with local environmental organizations, universities, and government agencies to access resources, funding, and expertise.

Additionally, digital tools and online resources can be invaluable in resource-limited settings. Virtual field trips, online simulations, and educational videos can provide students with rich learning experiences even when access to natural environments is restricted.

Schools can also adopt simple, cost-effective practices that model sustainability, such as implementing recycling programs, reducing energy use, and encouraging water conservation. Involving students in these efforts can turn the school itself into a living example of eco-literacy in action.

Integrating Eco-Literacy into Traditional Islamic Studies

Successfully integrating eco-literacy into traditional Islamic studies requires a thoughtful approach that highlights the compatibility of environmental stewardship with Islamic values. Educators can achieve this by drawing connections between ecological principles and religious teachings, showing how caring for the environment is an expression of faith. For instance, when teaching about *zakat* (charity), educators can discuss the concept of *sadaqah jariyah* (ongoing charity) in the context of planting trees or conserving resources for future generations. Similarly, lessons on *tawhid* (the Oneness of God) can explore the interconnectedness of all creation and the responsibility to maintain the balance established by Allah.

However, by presenting eco-literacy as an integral part of Islamic studies, educators can help students see environmental stewardship as a religious obligation and a form of worship. This approach not only enriches students' understanding of Islam but also empowers them to take meaningful action in protecting the environment.

CONCLUSION

Islamic teachings on environmental stewardship provide a comprehensive ethical framework for addressing contemporary environmental challenges. The Quran and Hadith emphasize the importance of caring for the Earth, highlighting principles such as moderation, conservation, and justice. The concept of *khalifah* underscores the responsibility of humans to act as stewards, ensuring the sustainable use and protection of natural resources. By integrating these values into



educational practices, Islamic educational institutions can play a pivotal role in fostering environmental consciousness and promoting sustainable living.

The integration of eco-literacy values in teaching-learning activities rooted in Islamic thought highlights the profound connection between education, environmental stewardship, and faith. Islam's holistic approach to the environment, through the concept of *khalifah* (stewardship), urges humanity to protect and sustain the natural world. By embedding eco-literacy within educational curricula, it can foster a generation that not only understands the importance of the environment but also feels morally and spiritually responsible for its care.

In essence, integrating eco-literacy aligns with the Islamic worldview that emphasizes the balance between human activity and environmental harmony. It fosters a deeper connection between learners and the environment, instilling values of responsibility, sustainability, and justice that are essential in facing modern ecological challenges. Through this integration, education becomes a powerful vehicle for nurturing environmentally conscious individuals who embody the principles of Islam in their everyday lives, contributing to a more sustainable and equitable world.

Integrating eco-literacy values into teaching-learning activities is an essential approach in contemporary education, as it fosters an understanding of the interconnectedness between human actions and the environment. By incorporating eco-literacy into education, we can prepare students to be informed, responsible citizens who are capable of making decisions that support environmental sustainability.

Educational strategies that incorporate eco-literacy enhance students' awareness of environmental issues and their role in addressing them. Practical applications of eco-literacy in schools, such as outdoor learning, project-based activities, and community involvement, help students develop critical thinking, empathy, and an ethical framework aligned with Islamic teachings.

Through the concept, it possibly underscores the importance of integrating eco-literacy values into teaching-learning activities within Islamic educational frameworks. By leveraging Islamic environmental ethics, educators can develop environmentally conscious, responsible, and ethical individuals. The findings provide valuable insights for future research and practical implementation promoting the environmental education.

In short, integrating eco-literacy values into teaching-learning activities as an implementation of Islamic thought is a crucial yet challenging endeavor. By addressing curriculum constraints, enhancing teacher training, promoting cultural engagement, maximizing resources, and thoughtfully integrating eco-literacy into Islamic studies, educators can overcome these challenges and foster a generation of environmentally conscious and ethically responsible individuals. Through this



integration, Islamic education can play a vital role in cultivating a deep respect for the natural world and a commitment to sustainable living, reflecting the true essence of stewardship as taught in Islam.

BIBLIOGRAFI

- Al-Razi, Muhammad Fakhruddin, Abdul Madjid, and Ahmad Hadziq Madani Ilham Khalil. "Reconstructing the Islamic Education Paradigm in Indonesia." *Edukasi: Jurnal Penelitian Pendidikan Agama dan Keagamaan* 22, no. 2 (August 2024): 294–310.
- Archer, D, and S Rahmstorf. *The Climate Crisis: An Introductory Guide to Climate Change*. UK: Cambridge University Press, 2010.
- Blumenfeld, P. C, E Soloway, R. W Marx, J. S Krajcik, M Guzdial, and A Palincsar. "Motivating Project-Based Learning: Sustaining the Doing, Supporting the Learning ." *Educational Psychologist* 26, no. 3–4 (1991): 369–398
- Bogdan, R.C, and S.K Biklen. *Qualitative Research for Education: An Introduction to Theories and Methods*. Pearson Education, 2007.
- Bratianu, Constantin. "How the Theory of Knowledge Fields and Knowledge Dynamics Is Shaping Spiritual Knowledge and Wisdom." *Spirituality and knowledge dynamics: New perspectives for knowledge management and knowledge strategies* (2024): 7–26.
- Capra, F. *The Hidden Connections: Integrating the Biological, Cognitive, and Social Dimensions of Life into a Science of Sustainability*. , 2002.
- Carson, R. *Silent Spring*. NY: Houghton Mifflin, 1962.
- Habaora, Fellyanus, Jefirstson Richset Riwukore, Suryo Adiwibowo, and Yohanes Susanto. "Science Philosophy of Ecology by Fritjof Capra, and Its Relevance with Local Wisdom." *Jurnal Kebudayaan* 15 (July 2020): 41–51.
- Hassan, R, and A Kurshid. *Islam and Sustainable Development: New Worldviews*. Routledge, 2017.
- Ibrahim, A, and M Taneh. *Islamic Environmental Ethics: Foundations, Concepts, and Challenges*. Routledge, 2020.
- Ibrahim, H. S, and A Salama. "Integrating Eco-Literacy into Islamic Education: An Analysis of Opportunities and Challenges." *Journal of Islamic Studies and Culture* 9, no. 2 (2021): 11–25.
- Idllalene, Samira. *Rediscovery and Revival in Islamic Environmental Law: Back to the Future of Nature's Trust*. Cambridge University Press, 2021.
- Ignatow, Gabriel. "Theories of Embodied Knowledge: New Directions for Cultural and Cognitive Sociology." *Journal for the Theory of Social Behaviour* 37 (June 2007): 115–135.



- Kahil, Abdallah. "Ecology and Islam." In *Encyclopedia of Psychology and Religion*, edited by David A Leeming, 735–739. Springer, 2020.
- Kolb, D.A. *Experiential Learning: Experience as the Source of Learning and Development*. Pearson Education, 2015.
- Orr, D W. *Ecological Literacy: Education and the Transition to a Postmodern World*. SUNY Press, 2022.
- Palmer, J A. *Environmental Education in the 21st Century: Theory, Practice, Progress, and Promise*. Routledge, 1998.
- Qattan, Manna Khalil. *Studi Ilmu-Ilmu Al-Qur'an*. Bogor: Pustaka Litera Antar Nusa, 1996.
- Riwukore, Jefirstson Richset, Fellyanus Habaora, Yohanes Susanto, and Asnath Maria Fuah. "Falsafah Science of Fritjof Capra in Handling the Environment Destruction." *American Journal of Engineering and Technology Management* 5, no. 9 (December 2020): 103–115.
- Robby, S Kapatan Inda, and M Karmilah. "Building Sustainable Character through Community-Based Environmental Education." *International Journal of Integrative Sciences* 2, no. 11 (November 2023): 1833–1842.
- Rossidy, Imron, Ahmad Barizi, Abdul Haris, and Esa Nur Wahyuni. "Concept of Islamic Integrated Education and Its Implementation at Ar-Rohmah Educational Institute Malang." *Didaktika Religia: Journal of Islamic Education* 11, no. 1 (June 2023): 61–84.
- Sardar, Z, and M Sardar. *The Greening of Islam: Perspectives on Islam, Nature, and the Environment*. Bloomsbury Academic, 2018.
- Sayuti, H, T Ann, W Saimi, M Bakar, S Dawawi, and M Mohamad. "Using Gold Standard Project Based Learning for Intermediate Year Three Pupils to Enhance English Speaking Skill: A Conceptual Paper." *Creative Education* 11 (2020): 1873–1889
- Shihatah, H. *The Philosophy of Islamic Education and Its Role in Preparing Future Generations*. Cairo: Dar Al-Fikr Al-Arabi, 2001.
- Smith, G.A, and D Sobel. *Place- and Community-Based Education in Schools*. Routledge, 2010.
- Sobel, David. *Place-Based Education: Connecting Classroom and Community*. Great Barrington, MA: Orion Society, 2004.
- Sterling, S. *Learning and Sustainability in a Dangerous World*. Newcastle: Agenda Publishing, 2024.
- Yunansah, Hana, and Yusuf Tri Herlambang. "Pendidikan Berbasis Ekopedagogik Dalam Menumbuhkan Kesadaran Ekologis Dan Mengembangkan Karakter Siswa Sekolah Dasar." *Eduhumaniora: Jurnal Pendidikan Dasar* 9, no. 1 (2017): 27–34.