Najwa Huda Shaharil¹, Sharifah Intan Sharina Syed-Abdullah², Fathiyah Mohd Fakhruddin³, Norshariani Abd Rahman⁴ and Mohd Aswad Ramlan⁵

Abstract

This study utilizes theocentric outdoor environmental education (TOEE) approach in a one-day program for 20 pre-service science teachers to explore how the spirituality aspects in TOEE approach impacts participants' environmental affective disposition. Participants' experiences in the program were interpreted through photo elicitation focus group discussions. The findings suggest that the TOEE approach nurtures environmental disposition among pre-service science teachers. TOEE approach enhances aspects of environmental disposition in three key ways: (i) by fostering environmental sensitivity through a profound sense of reverence and gratitude for nature as a divine creation; (ii) by instilling a sense of personal responsibility through the recognition of one's role as khalifah or steward on Earth; and (iii) by motivating individuals through the belief in divine rewards and punishments, which encourages pro-environmental actions and discourages environmental harm. The insights serve as a practical strategy for enhancing the current sustainability curriculum to better fit the Malaysian religious context.

Keywords: Theocentric Approach, Islam, Education for Sustainable Development (ESD), Outdoor Learning, Environmental Education.

INTRODUCTION

Many developing Muslim nations regard Malaysia as an exemplary contemporary nation-state that has effectively integrated Islam and modernity. Malaysia is a multiracial country with Islam as the official religion. Approximately 63% of Malaysia's population are Muslims (Statista Research Department, 2022). They follow the teachings of Islam according to the Ahl Sunnah wa al-Jama'ah creed and adhere to the Syafie school of thought for their jurisprudential practices. Unlike some Islamic countries that enforce Sharia law comprehensively, Malaysia's application of Sharia is limited mainly to personal status issues such as family and marriage among Muslims. While Sharia law exists in Malaysia, it does not mandate daily religious obligations like obligatory prayers, fasting and covering 'awrah. Despite the lack of legal enforcement in some aspects, the strong religious identity among Malaysian Muslims is evident, with many adhering to religious obligations out of personal conviction and communal norms (Ghazali, 2016).

Religion can significantly influence an individual's behavior when religious values are internalized. This phenomenon can be explained through the idea of the negotiation process between social identity and personal identity, as well as between social values and personal values. Through this negotiation, individuals align their personal actions and decisions with the broader values and norms (Syed-Abdullah, 2018) endorsed by their religious community. This alignment underscores the dynamic interplay between collective religious frameworks and individual beliefs, ultimately shaping behavior in ways that reflect both societal expectations and personal convictions.

Based on this idea, it is posited that environmental crises can be mitigated by shaping individuals' environmental behavior through the influence of their religious beliefs. By leveraging the moral and ethical frameworks provided by religious teachings, individuals can be motivated to adopt more sustainable practices. This

¹ Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia, Email: najwa.shaharil93@gmail.com

² Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia, Email: sharifahintansharina@upm.edu.my, (Corresponding Author)

³ Faculty of Educational Studies, Universiti Putra Malaysia, Malaysia, Email: fathi@upm.edu.my

⁴ Institute of Islam Hadhari, Universiti Kebangsaan Malaysia, Malaysia, Email: norshariani@ukm.edu.my

⁵ Faculty of Forestry and Environment, Universiti Putra Malaysia, Malaysia. Email: m.aswad@upm.edu.my

approach suggests that religious values can play a crucial role in fostering a sense of responsibility and stewardship towards the environment, thus contributing to broader efforts in addressing ecological challenges.

Many environmental education interventions have utilized an outdoor approach to promote environmentally responsible behavior. Research by Louv (2012), Collado et al. (2020), and Mann et al. (2022) have demonstrated the effectiveness of this method. However, research conducted by Syed Abdullah (2018) and Wang et al. (2023) suggest that while this approach may yield positive results in the short term, it may not be sustainable over the long term. One possible explanation of this is the argument that the current environmental education practices place too much focus on behavior change that often leads to a "transmissive" educational model rather than a transformative one (Syed-Abdullah, 2018). This approach primarily seeks to alter behavior by conveying specific facts and values from authorities to learners (Jickling & Wals, 2008). According to the authors, instead of fostering a genuine understanding or encouraging critical thinking, it merely conditions individuals to adopt prescribed behaviors. This method can result in people following directives from governments, interest groups, or industries that may have a certain agenda rather than developing a nuanced, personal commitment to sustainability. Critics suggest that simply knowing facts does not effectively inspire meaningful action or promote the independent thinking necessary to address complex environmental challenges (Ashley, 2005; Wals, 2011).

Furthermore, the transmissive approach of ESD is criticized for its superficial treatment of environmental issues, focusing mainly on immediate technical solutions and embodying "shallow ecology,". This approach addresses symptoms rather than underlying causes, often neglecting deeper ethical considerations and systemic changes needed for true sustainability (Naess, 1986). Critics argue that the current ESD model may reflect consumerist, capitalist, and neoliberal values, perpetuating the influences of the Industrial Revolutions. Consequently, this framework lacks the ethical and value-driven foundation necessary for fostering genuine, sustainable transformations, focusing instead on technical fixes for issues like pollution and resource depletion without addressing the essential changes in individual values or societal practices (Kwauk, 2020).

To counteract both of these issues, a transformative educational approach is needed—one that not only conveys information but also engages students in critical thinking, ethical reflection, and personal connection to environmental issues (Ashley, 2005; Bowler, 2015; Jickling and Wals, 2008; Scott, 2009; Tilbury, 2009). The theocentric approach, which integrates spiritual and ethical principles into the curriculum, can address these issues by fostering a deeper, more holistic understanding of environmental challenges (Banarji & Prasad, 2018). This approach emphasizes participatory learning, where students are encouraged to explore and engage with environmental issues through the lens of spiritual and ethical values (Muhamad et al., 2021).

Although numerous studies have examined the integration of spirituality with environmental education, particularly emphasizing Islamic teachings (e.g., Abd Rahman et al., 2019; Yasin, 2019; Abdi, 2018), the combination of spirituality and outdoor environmental education remains largely unexplored. This integration is crucial for enhancing the effectiveness of outdoor environmental education, especially given the significant role of spirituality in the Malaysian context. Therefore, this study explores a theocentric approach to outdoor environmental education is assumed to impact individuals' motivation to engage in public discussions about environmental issues, as well as their ability to identify and select among value perspectives (Hollweg et al., 2011).

Integration of Spirituality with Environmental Education

Various models have been proposed for integrating Islamic principles into environmental education, each offering valuable insights. Integrated Islamic Environmental Education Model by Rahman (2022) focuses on incorporating Islamic environmental ethics into existing educational frameworks by aligning environmental teachings with key Quranic concepts and ethical principles. This integration is proposed to be implemented across various subjects, including aqīdah, Quran study, and ādāb and akhlāq, to enhance environmental education (EE) Model by al-Hadabi (2021) emphasizes integrating personal environmental experiences into teaching and learning. This model prioritizes actions aimed at enhancing environmental education by

incorporating insights from Qur'anic verses and the traditions of Prophet Muhammad (PBUH). The model highlights how Islamic teachings reflect the relationship between humans and the environment, suggesting that these elements should be included in educational curricula to cultivate students' values, attitudes, and knowledge about the environment.

In addition to that, the Theocentric Environmental Education and Conservation (TEfEC) framework by Abd Rahman et al. (2019) integrates Islamic principles into environmental education by emphasizing values and attitudes shaped by Islamic teachings. It also highlights the importance of knowledge, critical thinking, and problem-solving skills while promoting responsible environmental behavior in areas like consumption, ecological management, legislation, political action, persuasion, and education. The activities within the TOEE approach were adapted from the PENTAS module, which was developed based on this framework. Furthermore, another framework proposed in this study further contributes to this body of work by grounding deep ecological questions about humanity's relationship with nature in four Islamic concepts: Oneness of God (Tauhid), Creation (Fitra), Balance (Mizan), and Responsibility (Khalifah) (Muhamad et al., 2021). This model, along with the others, aims to foster a deeper understanding of environmental issues, moving beyond traditional transmissive methods to encourage genuine commitment to sustainability and systemic changes in environmental interactions.

Affective Disposition as A Domain of Environmental Literacy

According to the North American Association for Environmental Education (NAAEE) (2011), environmental affective disposition is one of the key domains of environmental literacy, alongside knowledge, competency, and behavior disposition. This article concentrates on the environmental affective disposition domain, noting that substantial transformation was potentially observed through the theocentric approach.

This domain encompasses several aspects. Environmental sensitivity, as discussed by Chawla (1998) and Sward and Marcinkowski (2001), focuses primarily on the natural world. In contrast, attitudes toward environmental issues, highlighted by Dunlap (2002) and Hines et al. (1986/87), and general concern for the environment, emphasized by Van Liere and Dunlap (1980), focus on environmental problems. Additionally, certain dispositions such as assuming personal responsibility, having a sense of control or self-efficacy, motivation, and the intention to take action, as noted by Hines et al. (1986/87) and Bandura (1977), are associated with proactive problem-solving behaviors. These dispositions are shaped by various experiences and predisposes individuals to actively participate in making decisions and solving problems related to environmental issues (Hollweg et al., 2011).

Numerous studies have demonstrated the effectiveness of outdoor environmental education in improving environmental affective dispositions. Okur-Berberoglu and Uygun (2013) found that outdoor environmental education fosters awareness and positive attitudes toward the environment. This is further supported by Ardoin and Bowers's (2020) systematic review, which concluded that immersive outdoor programs offer experiences that inspire actions to enhance and protect the environment, thereby significantly improving students' environmental dispositions. While existing research has highlighted the benefits of outdoor environmental education in improving students' environmental dispositions, the potential role of spiritual and religious beliefs remains under examined.

METHODOLOGY

A qualitative research approach is chosen for its flexibility in thoroughly exploring and identifying emerging themes, as noted by Schensul et al. (1999). Specifically, a generic qualitative approach was used to investigate how experiences are perceived and described in real-world contexts (Willgens et al., 2016).

Sample And Sampling Method

Participants were identified and selected using purposive sampling, employing both convenient and snowball techniques. The sample in this study was selected based on three inclusion criteria. First, the participants consist of final year pre-service science teachers. Selecting participants who are in their final year of studying ensures that they have accumulated substantial academic knowledge and pedagogical training. Their advanced status

implies a deeper understanding of both scientific concepts and educational methodologies, making their insights particularly valuable for evaluating the effectiveness and relevance of the integrated approach to environmental education. Secondly, participants were required to have prior experience with a theocentric approach to outdoor environmental education. Finally, their involvement in this research was entirely voluntary. As a result of these techniques and inclusion criteria, 20 pre-service science teachers participated in this study. Eight participants majored in biology, seven in physics, and five in chemistry. The descriptive demographic information is presented in Table 1.

Participant	Age	Gender	Religion	Science major
Balqis	23	Female	Islam	Biology education
Nora	23	Female	Islam	Biology education
Hamizah	23	Female	Islam	Biology education
Khatijah	23	Female	Islam	Biology education
Fadhilah	23	Female	Islam	Biology education
Ruhi	24	Female	Islam	Biology education
Kamil	23	Male	Islam	Physics education
See Toh	23	Male	Christian	Biology education
Hanis	23	Female	Islam	Biology education
Wan	23	Male	Islam	Physics education
Fitri	23	Male	Islam	Chemistry education
Atikah	23	Female	Islam	Chemistry education
Hana	23	Female	Islam	Chemistry education
Zu	23	Female	Islam	Chemistry education
Nabilah	23	Female	Islam	Chemistry education
Iman	23	Female	Islam	Physics education
Hajidah	23	Female	Islam	Physics education
Najihah	23	Female	Islam	Physics education
Kamilah	23	Female	Islam	Physics education

Table 1: Distribution of samples

The inclusion criteria did not specify that participants had to be Muslim, so one non-Muslim pre-service science teacher participated in the study. His participation suggests that the appeal and relevance of the program might extend beyond the intended religious demographic, highlighting its broader applicability and potential for inclusivity in environmental education.

Data Collection

Locating programs implementing the TOEE approach and participants with relevant experiences proved challenging. To address this challenge, the research team organized a one-day program specifically applying the TOEE approach for a group of pre-service teachers to evaluate their environmental disposition post-

participation. Activities within this integrated approach were adapted from the PENTAS module, which incorporates the Tauhidic Elements for Environmental Conservation (TEFEC) framework (Abd Rahman, 2019). Modifications were made to adapt the PENTAS Module activities for outdoor settings. The modifications stemmed from the gap identified in existing literature regarding the integration of spirituality despite ample outdoor learning activities available. Thus, integrating spirituality into outdoor education aims to enhance its effectiveness, particularly considering spirituality's significant influence in the Malaysian context.

The methods used to collect research data was focus group discussion (FGD) and photo elicitation. Photo elicitation is a technique that involves presenting participants with photographs and asking them to interpret the objects, people, places, or activities depicted (Grasseni, 2016). This method enables researchers to understand how participants derive meaning from visual stimuli. This technique was adopted to make sure the participants' rich perceptions would be captured during the session. Combining photo elicitation with a FGD was aimed to activate and engage the participants during the data collection. The FGD took place one week after the program via virtual meetings on the Zoom application. Each group discussion lasted between 45 and 60 minutes. The FGDs involved four groups with five members in each group. In the first three groups, participants were organized according to their majors to capitalize on their shared knowledge and experiences in their respective disciplines. The fourth group, however, consisted of a mix of different majors to encourage interdisciplinary collaboration and bring together a range of perspectives. During the FGD sessions, participants were prompted with questions such as, "what is your perception of the TOEE approach?", "how do the spirituality elements impact you personally?" and "do you think the approach will be effective in nurturing young students to be more environmentally literate?"

Data Analysis

Research data was transcribed and then analyzed thematically. The thematic analysis went through a 3-stage of analysis process, which are coding, categorizing and themes development. Data analysis includes both inductive and deductive reasonings of participants' discussions.

Ethical Consideration

This study acknowledges the ethical aspects involved in data collection. Throughout the writing process, confidentiality was upheld rigorously, with pseudonyms used in place of participants' real names. Data collection was conducted following approval from the Ethics Committee for Research Involving Human Subjects (JKEUPM). Participation was voluntary, requiring informed consent from all participants. The consent forms detailed the research objectives, the outdoor program specifics, and safety measures. Participants had the option to withdraw from the study at any time without facing any penalties.

RESULTS AND DISCUSSION

The findings from the study suggest that the TOEE approach nurtures environmental affective disposition among pre-service Science teachers, particularly focusing on environmental sensitivity, a sense of personal responsibility, as well as their motivation. These elements fall within the framework of environmental literacy based on NAAEE (2011). Notably, these discussions were approached uniquely, integrating a theocentric worldview into their perspectives.

Table 1 explains the brief definition and provides examples of interview excerpts for each of the dimensions.

Environmental Affective Disposition Domains	Brief definition	Example of interview excerpt
Environmental sensitivity	An individual's own inclination and empathetic viewpoints towards the surroundings. It encompasses deep emotions that are shaped by impactful life events.	"So, we should be grateful [of the environment] because Allah has created good things for us, and we need to appreciate the life we have." (Fitri)
Sense of personal responsibility	The awareness and acknowledgement of the negative outcomes that may arise from not behaving in a manner that	"In the Quran, Allah says that He intends to make humans His viægerents on Earth. However, the angels questioned why

Table 2: Findings overview

	promotes the well-being of others.	He would create beings who would corrupt the earth and shed blood." (Iman)
Motivation	The tendency and intention to guide an individual's behavior towards achieving a goal.	"We will be held accountable for our actions. This awareness made me more conscious of my actions after the program." (Fitri)

Detailed findings for each of the domains are explained in the following paragraphs.

Environmental Sensitivity

Environmental sensitivity is often linked to personal inclination and empathetic views towards the environment, encompasses deep-seated attitudes shaped by meaningful life experiences (Chawla, 1998; Sward & Marcinkowski, 2001). The findings of this study suggest that recognizing nature as a divine creation will deepen sensitivity, fostering profound reverence towards nature and acknowledging its significance. This suggestion is evident from excerpts of FGD with Khatijah and Atiqah:

"So there, I just realized that actually, the environment and the plants, animals, and everything, they don't do anything but simply obey God." (Khatijah)

"So we can appreciate even the smallest creations of Allah. Before this, I never even wanted to search for leeches, always trying to avoid them. But when I encountered a leech, somehow it brought me closer to the Creator." (Atiqah)

Upon viewing the creations through the lens of servitude to God, some participants perceived nature as another entity obedient to God's will. This perspective aligns with the concept of eco-spirituality, which integrates spiritual beliefs with environmental consciousness, asserting that nature is a reflection of the divine and should be treated with respect and care (Berry, 1999; Fox, 1996). Eco-spirituality emphasizes that all elements of the natural world are interconnected and sacred, which can lead to a deeper sense of environmental stewardship and responsibility (Edwards, 2006). The recognition of nature's divine aspect resonates with the teachings of Islamic traditions, as the Quran frequently references the signs of God in nature. This encourages believers to reflect on the natural world as a means to understand and appreciate the Creator (Khalid, 2010).

In relation to that, some participants also expressed profound gratitude and appreciation towards God for His creation. For example, according to Kamil,

"In the jungle, we appreciated our surroundings, praised Allah, and said Subhanallah. By doing that, it brings us closer to God. Observing the beauty of nature fills us with a sense of gratitude" (Kamil).

The participant's expression of gratitude towards Allah for nature, corresponds with Weber's assertion that integrating ecological awareness with emotional and spiritual dimensions can deepen appreciation for life and promote sustainable relationships with the natural world (Weber, 2016). Similarly, Joldersma (2009) and Tam (2022) propose that cultivating gratitude towards nature is pivotal in nurturing conservation ethics and predicting positive environmental outcomes.

In addition, becoming more attuned to the awe-inspiring aspects of life, particularly through spiritual practices, could also deepen individuals' appreciation for the blessings and wonders around them (Bussing, 2021). During the FGD, a number of participants recounted the spiritual encounters during their ablution rituals by the river and engagement in obligatory prayers within the setting of the jungle. As stated by Hanis:

"Then, during the time we had prayers, I was watching others pray, I felt like, wow, it's so peaceful. Even when I took pictures from behind, it felt like something was being born." (Hanis)

Hanis' reflection highlights the profound impact of observing sacred rituals in nature. Witnessing others in prayer filled her with a sense of peace and awe, likening the experience to something new being born. This observation emphasizes the unique opportunities religious rituals can provide to deepen the participants' spiritual connection beyond traditional places of worship.

Bussing (2021) suggests that spiritual practices can heighten one's awareness of moments of awe aligning with the participants' experiences in nature. The participants' experiences illustrate how spiritual practices can evoke a profound sense of tranquility and renewal. This indicates that the ability to perceive awe can be cultivated through spiritual practices or is inherently developed as part of the spiritual journey, especially in natural settings. In essence, the participants' reflection illustrates that spiritual practices in natural settings can significantly enhance both spiritual and ecological awareness.

In summary, this integration fosters a deeper appreciation for life and encourages sustainable interactions with the natural world, aligning with the broader goal of nurturing an environmental disposition among pre-service Science teachers through the TOEE approach.

Sense of Personal Responsibility

Sense of personal responsibility is defined as the awareness and acknowledgement of the negative outcomes that may arise from not behaving in a manner that promotes the well-being of others (Setiawan et al., 2021). The Model of Responsible Environmental Behavior identifies individual responsibility as a key factor influencing environmentally responsible actions (Hines et al., 1986). According to the model, individuals who possess a strong sense of personal responsibility are more inclined to engage in behaviors that promote environmental stewardship. In this study, participants expressed personal responsibility through their identification with the role of khalifah or vicegerents on Earth, emphasizing their stewardship over the environment entrusted by divine authority, as defined by Khalid (2010). Hana was one of many participants that clearly stated this in the discussions. According to her,

"...as caliphs on earth we are responsible to care for the environment because we have been given intellects, so we are capable of choosing right from wrong. So our role is to ensure the sustainability of every living creature on this planet." (Hana)

The statement by this participant raises a very important point. She asserts that each and every one of us has been appointed as the roles of caliphs on earth to prosper and preserve the environment as stated in the Quran, 'Remember when your Lord said to the angels, 'I am going to place a caliph on earth...' (The Qur'an al-Baqarah 2:30).

In examining the roles of a caliph from the Quranic perspective, Sheikh Wahbah Al-Zuhaili (2009) in Tafsir al-Munir and Quraish Shihab (2002) in Tafsir al-Misbah both address this concept. Al-Zuhaili and Shihab agree that humans are entrusted with the responsibility of guarding, nurturing, managing and caring for the earth as Allah's vicegerents. The scholars emphasize that the role of caliphs that involves organizing and developing the earth should always be done according to the divine laws. There is also a strong emphasis on the need for holistic interactions, both among humans and between humans and nature as an integral part of caliphhood to promote a broader ecological and social harmony (Shihab, 2002).

Another crucial element of environmental preservation emphasized by the concept of caliph is the necessity to refrain from actions that harm the natural ecosystem (Nasir & Tahir, 2024). According to Khatijah,

"Yes, we need to show respect because sometimes humans forget and think they are the most noble creatures on this earth. So, when we destroy what we have, we don't consider the future generations." (Khatijah)

Khatijah's reflection acknowledges the danger of human arrogance and the necessity of humility in recognizing our place in the natural order. This discussion echoes White's (1967) argument that religious traditions, including Islam, contribute to the ecological crisis by promoting human dominance over nature and the belief that nature exists solely to fulfill human needs. Contrary to White's claim, in the Quran in verse 56 of Surah Al-A'raf, it is explicitly stated that actions that harm the environment are prohibited. The verse can be translated as: "And do not commit abuse on the earth, after its reformation. And invoke Him in fear and hope. Indeed, the mercy of Allah is near to the doers of good" (Quran 7:56). This verse emphasizes the importance of preserving the earth and acting with reverence for God's creation, demonstrating that Islam promotes a balanced and respectful approach to environmental care rather than a view of nature as merely a resource for human exploitation (Nasir & Tahir, 2024). In summary, this sub theme explores participants' reflections that

resonate with the Islamic concept of humans as caliphs on earth. It highlights that environmental preservation transcends scientific and economic issues, framing it as a spiritual obligation (Shihab, 2002). This perspective advocates for a profound shift in human attitudes and behaviors, emphasizing the need for responsibility and stewardship towards the earth and all its inhabitants.

Motivation for Environmental Responsible Behavior

Gopalan et al. (2020) discuss different definitions of motivation, which can be summarized as the inclination and purpose to direct an individual's actions towards accomplishing a specific objective, propelled by the vigor and force that initiate and maintain this behavior. It encompasses establishing objectives, the readiness to exert effort to achieve these objectives, and the assurance to persevere without being disheartened. They also assert that motivation functions as a catalyst for action, offering psychological drive and conviction rather than serving as a substitute for persuading.

According to the theory of applied behavioral analysis, individuals are inclined to repeat behaviors that lead to positive outcomes while avoiding those that result in negative consequences (Willems, 1974). Additionally, the environmental cues that signal the availability of consequences, known as antecedents, play a crucial role in guiding behavior towards desired outcomes. Therefore, the three-term contingency or ABC model, which the letters represent antecedent, behavior and consequence, is extensively employed in interventions aimed at promoting environmental behavior improvement (Iwata et al., 1982).

According to Bolderdijk et al. (2012), environmental behavior often relies on both natural and extrinsic consequences to motivate change. Natural consequences naturally follow from engaging in a behavior, However, when many environmental behaviors lack these inherent outcomes, it can diminish motivation to act. Therefore, extrinsic consequences like rewards and punishments are crucial to incentivize behavioral changes.

However, using extrinsic consequences present a few challenges. Firstly, relying on temporal punishment, which refers to penalties imposed by human systems and laws, can trigger psychological reactance and counter-control (Brehm, 1966; Sidman, 1989). For instance, fearing punishment, individuals might resort to illegal dumping rather than reducing waste. Secondly, penalty strategies can foster negative perceptions of the enforcing authorities (Geller, 2002). Conversely, offering monetary rewards may lead people to view actions more as economic decisions rather than ethical ones (Lindenberg & Steg, 2007; Tenbrunsel & Messick, 1999).

In this study, participants' inclination towards intending and being motivated to engage in environmental responsible behaviors was possibly influenced by their religious beliefs. Fitri's statement emphasizes this relationship:

"If we abuse mother nature, we will be questioned about it later (in the day of Judgment). We will be held accountable for our actions. This awareness made me more conscious of my actions after the program. It means that before I throw something away (for example), I should consider whether I can justify my actions if I am going to be questioned about them later." (Fitri)

This finding is consistent with the idea that individuals' intention to act is shaped by their beliefs and values regarding specific issues, as noted by Hungerford et al. (1996).

The participant was actually referring to the Islamic concepts of Tarhib or punishment, derived from the Quran. According to Bakhashab (1988), in Islamic jurisprudence and theology, the fear of divine punishment plays a crucial role in deterring actions that harm the environment and infringe upon public rights. The actions that are considered sinful will be subjected to punishment in the hereafter, as stated by the participant. This principle is derived from the concept of hukook al-'ibad (rights of the servants of God), which includes the right to a clean and healthy environment. This belief is rooted in the Quran and Hadith, which provide guidance on the ethical use and protection of natural resources (Bakhashab, 1988).

Beside punishment, the concept of divine reward or targhib is also used to incentivize believers through promises of rewards for good deeds, as mentioned by Hana:

"However, upon reflection, our religion also teaches that when we do good, such as picking up litter, we still earn rewards. Even just having the intention to do good brings rewards, let alone actually doing it. So, from this program, we learn that even the smallest actions we take can earn us rewards." (Hana)

The concept of reward in Islam further strengthens the motivation by providing clear rewards for environmental stewardship. The hadith by Prophet Muhammad peace be upon him (PBUH) exemplifies the positive reinforcement provided in Islam for actions that benefit the environment:

"Whoever plants trees, God will give him reward to the extent of their fruit" (Sahih Al-Bukhari, vol 3)

Based on these findings, it is evident that religious beliefs in the concept of divine rewards and punishments potentially serve as a strong antecedent for individuals to engage in pro-environmental actions and deter environmental harm. The Islamic faith emphasizes that believers should be motivated by divine consequences rather than by the natural ones, highlighting the judgment awaiting them on the Day of Resurrection. By emphasizing that harmful actions are punishable while beneficial actions are rewarded, this creates a balanced approach of fear and hope, as affirmed in Surah al-A'raf verse 56:

And do not commit abuse on the earth, after its reformation. And invoke Him in fear and hope. Indeed, the mercy of Allah is near to the doers of good (The Qur'an al-A'raf 7:56).

In summary, the research finding suggests that the TOEE approach encourages responsible actions and nurtures deep ethical motivations that extend beyond immediate or monetary rewards, thereby advancing environmental justice and mitigating environmental harm.

CONCLUSION

This study was conducted to explore the influence of the TOEE approach and on environmental affective disposition. The findings of the study suggest the existence of a theory-practice gap when it comes to dealing with a theocentric approach to outdoor environmental education. The integration of ecological awareness with spiritual aspects, as reflected in the participants' experiences, suggests that it has the potential to deepen environmental disposition and strengthen sustainable connections with the natural world. This finding also highlights that Islamic teachings encourage a holistic view that includes respect for nature and recognition of the divine presence in the natural world. This perspective counters the assertion that secularization, which separates human knowledge and power from religious contexts, has led to a dominance-based worldview.

Based on the findings of this study, the TOEE approach is suggested as one of the transformative approaches that aims to motivate modern Muslims to combine their spiritual beliefs with practical environmental actions. The integration of Islamic teachings can address the pressing issues of industrial and modern development by helping cultivate and promote environmental justice.

However, to promote this discussion, further investigation of this topic is needed. In light of this, we suggest the use of a quantitative approach to confirm the generalisability of the idea on the influence of spirituality on environmental disposition to inform a better and more objective result. The theocentric approach could also be implemented with participants of different backgrounds to determine if it yields consistent or divergent outcomes.

REFERENCES

- Abd Rahman, N., Zabidi, F., Othman, M., Halim, L., Iksan, Z., & Wan Abdullah, W. (2019). Conceptual Framework for Integration of Tauhidic Elements for Environmental Conservation (TEFEC): A Review. International Journal of Academic Research in Progressive Education and Development, 8(3), 70-83.
- Abdi, M. I. (2018). The Implementation of Character Education in Kalimantan, Indonesia: Multi Site Studies. Dinamika Ilmu, 18(2). https://doi.org/10.21093/di.v18i2.1289
- Acosta Castellanos, P.M., Queiruga-Dios, A., Encinas, A.H., & Acosta, L.C. (2020). Environmental education in environmental engineering: Analysis of the situation in Colombia and Latin America. Sustainability, 12(18), 7239.

- Al-Hadabi, A. (2021). Environmental Education (EE) from an Islamic Perspective. Journal of Amran University, 1, 305.
- Al-Zuhaili, W. (2009). Tafsir Al-Munir (Jilid 1-30). Beirut: Dar Al-Fikr Al-Mu'ashir.
- Ardoin, N.M., & Bowers, A.W. (2020). Early childhood environmental education: A systematic review of the research literature. Educ Res Rev, 31, 100353.
- Ashley, M. (2005). Tensions between indoctrination and the development of judgement: The case against early closure. Environmental Education Research, 11(2), 187-197.
- Bakhashab, O. A. (1988). Islamic Law and the Environment: Some Basic Principles. Arab Law Quarterly, 3(3), 287-298. https://doi.org/10.1163/157302588X00317
- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. Psychological Review, 84(2), 191-125.
- Banerji, S., & Prasad, R. (2019). Sustainable Development 2050: Spirituality The Missing Link. Purushartha A Journal of Management, Ethics and Spirituality, 11(2), 94.
- Berry, T. (1999). The Great Work: Our Way into the Future. Bell Tower.
- Bolderdijk, J. W., Lehman, P. K., & Geller, E. S. (2012). Encouraging Pro-Environmental Behaviour with Rewards and Penalties. In Environmental Psychology: An Introduction (pp. 233-242). Wiley & Sons. 0.1002/9781119241072.ch27
- Bowler, M. (2015). Environmental educators in San Diego to teach awareness. http://www.kpbs.org/news/2015/oct/14/environmental-education-conferenceaims-teach-awar/.
- Brehm, J. W. (1966). A theory of psychological reactance. Academic Press.
- Bussing, A. (2021). Wondering Awe as a Perceptive Aspect of Spirituality and Its Relation to Indicators of Wellbeing: Frequency of Perception and Underlying Triggers. Front Psychol. 10.3389/fpsyg.2021.738770
- Chawla, L. (1998). Significant life experiences: A review of research on sources of environmental sensitivity. The Journal of Environmental Education, 29(3), 11-21.
- Collado, S., Rosa, C., & Corraliza, J. (2020). The Effect of a Nature-Based Environmental Education Program on Children's Environmental Attitudes and Behaviors: A Randomized Experiment with Primary Schools. Sustainability, 12(17), 6817. https://doi.org/10.3390/su12176817
- Dunlap, R. E. (2002). Paradigms, theories, and environmental sociology. In R. E.
- Edwards, T. (2006). Ecology at the Heart of Faith. Orbis Books.
- Fox, M. (1996). Original Blessing: A Primer in Creation Spirituality. TarcherPerigee.
- Geller, E. S. (2002). The challenge of increasing proenvironmental behavior. In R. B. Bechtel & A. Churchman (Eds.), Handbook of environmental psychology (pp. 541-553). New York: John Wiley & Sons, Inc.
- Ghazali, N. (2016). Pendidikan Islam di Malaysia: Analisis kepentingan penghayatan mazhab Syafie. Geografia Online Malaysian Journal of Society and Space, 12(4), 147-157.
- Gopalan, V., Bakar, J. A. A., & Zulkifli, A. N. (2020). A review of motivation theories, models and instruments in learning environment. Journal of Critical Reviews, 7(6), 554-559.
- Grasseni, Cristina. 2016. "ERC Consolidator Grant: Food Citizens? Collective Food Procurement in European Cities: Solidarity and Diversity, Skills and Scale." Grant nr: 724151. Leiden University.
- Hines, J.M., Hungerford, H.R., & Tomera, A.N. (1986/87). Analysis and synthesis of research on responsible pro-environmental behavior: A meta-analysis. The Journal of Environmental Education, 18(2), 1-8.
- Hollweg, K. S., Taylor, J. R., Bybee, R. W., Marcinkowski, T. J., McBeth, W. C., & Zoido, P. (2011). Developing a framework for assessing environmental literacy. Washington, DC: North American Association for Environmental Education. Available at http://www.naaee.net.
- Hungerford, H., Lintherland, R. A., Peyton, R. B., Ramsey, J. M., & Volk, T. L. (1996). Investigating and evaluating environmental issues and actions: Skill development program (Teacher Ed.). Champaign, IL: Stipes Publishing, L.L.C.
- Jickling, B., & Wals, A. E. (2008). Globalization and environmental education: Looking beyond sustainable development. Journal of Curriculum Studies, 40(1), 1-21.
- Joldersma, C. W. (2009). How can science help us care for nature? Hermeneutics, fragility, and responsibility for the earth. Educational Theory, 59(4), 465-483.
- Khalid, F. (2010). Islam and the Environment-Ethics and Practice an Assessment. Religion Compass, 4(11), 707-716. https://doi.org/10.1111/j.1749-8171.2010.00249.x
- Kwauk, C. (2020). Roadblocks to Quality Education in a Time of Climate Change. Center of Universal Education at Brookings.
- Lindenberg, S., & Steg, L. (2007). Normative, gain and hedonic goal frames guiding environmental behavior. Journal of Social Issues, 63(1). 10.1111/j.1540-4560.2007.00499.x
- Louv, R. (2012). The Nature Principle: Reconnecting with Life in a Virtual Age. Algonquin Books.
- Mann, J., Gray, T., Truong, S., & Brymer, E. (2022). Getting Out of the Classroom and Into Nature: A Systematic Review of Nature-Specific Outdoor Learning on School Children's Learning and Development. Frontiers in Public Health, 10, 1-12. 10.3389/fpubh.2022.877058
- Marouli, C., & Duroy, Q. (2019). Reflections on the transformative power of environmental education in contemporary societies: Experience from two college courses in Greece and the USA. Sustainability, 11(22), 6465.
- Muhamad, M. M., Syed-Abdullah, S. I. S., & Mohamad Arsad, N. (2021). The Theocentric Worldview: Sustainability Education for Religion and Spiritual. Jurnal Ilmiah Peuradeun, 9(2), 275-292. doi:10.26811/peuradeun.v9i2.587

- Naess, A. (1986). The Deep Ecological Movement: Some Philosophical Aspects. Philosophical Inquiry, 8(1/2), 10-31. https://doi.org/10.1007/978-1-4020-4519-6_88
- Nasir, M. I., & Tahir, M. (2024). The role of human beings as Khalifah in maintaining environmental preservation according to Al-Munir's interpretation. International Journal of Humanities and Education, 1(1), 1-8.
- National Geographic Society. (2022, May 19). Anthropocene. National Geographic Society. Retrieved December 26, 2022, from https://education.nationalgeographic.org/resource/anthropocene.
- Okur-Berberoglu, E., & Uygun, S. (2013). The Effect of Outdoor Education on Environmental Knowledge, Awareness, and Attitude: Case Study within In-Service Teachers. Turkish Journal of Teacher Education, 2(2), 65-81.
- Pavid, K. (2022). What is the Anthropocene and why does it matter? Natural History Museum. Retrieved December 27, 2022, from https://www.nhm.ac.uk/discover/what-is-the-anthropocene.html.
- Rahman, A. K. (2022). Islamic environmental ethics: a model for shaping Muslim attitudes in helping to promote environmental education, awareness and activism. Masters thesis, University of Wales Trinity Saint David.
- Schensul, S. L., Schensul, J. J., & LeCompte, M. D. (1999). Essential ethnographic methods: Observations, interviews, and questionnaires. Walnut Creek, CA: AltaMira Press.
- Scott, W. (2009). Judging the effectiveness of a sustainable school: A brief exploration of issues. Journal of Education for Sustainable Development, 3(1), 33-39.
- Setiawan, B. (2021). Personal norm and pro-environmental consumer behavior: an application of norm activation theory. ASEAN Marketing Journal, 13(1), 40-49.
- Shihab, M. Q. (2002). Tafsir Al-Misbah: Pesan, kesan dan keserasian Al-Quran (Jilid 1-15). Lentera Hati.

Sidman, M. (1989). Coercion and its fallout. Authors Cooperative.

- Statista Research Department. (2022, October 5). Malaysia: religious affiliation. Statista. Retrieved July 29, 2024, from https://www.statista.com/statistics/594657/religious-affiliation-in-malaysia/
- Sward, L., & Marcinkowski, T. (2001). Environmental sensitivity: A review of the research, 1980-1998. In H. Hungerford, W. Bluhm, T. Volk, & J. Ramsey (Eds.), Essential readings in environmental education (pp. 277-288). Champaign, IL: Stipes Publishing, L.L.C.
- Syed Abdullah, S. I. S. (2018). An investigation into the influence of outdoor environmental education courses on the environmental attitude and behaviours of Malaysian participants: a life history approach. In Doctoral dissertation (p. 39). University of Edinburgh. http://dx.doi.org/10.7488/era/131
- Tam, K. P. (2022). Gratitude to nature: Presenting a theory of its conceptualization, measurement, and effects on proenvironmental behavior. Journal of Environmental Psychology, 79, 101754. doi:10.1016/j.jenvp.2021.101754
- Tenbrunsel, A. E., & Messick, D. M. (1999). Sanctioning systems, decision frames, and cooperation. Administrative Science Quarterly, 44(4), 684-707. https://doi.org/10.2307/2667052
- Tilbury, D. (2009). Tracking our progress: A global monitoring and evaluation framework for the UN DESD. Journal of Education for Sustainable Development, 3(2), 189-193.
- UNESCO. (2017). Education for Sustainable Development Goals: Learning objectives. UNESCO Publishing. https://doi.org/10.54675/CGBA9153
- Van Liere, K. D., & Dunlap, R. E. (1980). The Social Bases of Environmental Concern: A Review of Hypotheses, Explanations and Empirical Evidence. Public Opinion Quarterly, 44(2). 10.1086/268583.
- Wals, A. E. (2011). Learning our way to sustainability. Journal of Education for Sustainable Development, 5(2), 177-186.
- Wang, J., Sankaridurg, P., & Naduvilath, T. (2023). Time outdoors positively associates with academic performance: a schoolbased study with objective monitoring of outdoor time. BMC Public Health, 23(645). https://doi.org/10.1186/s12889-023-15532-y
- Weber, A. (2016). Biopoetics: Towards an existential ecology. Springer Nature. 10.1007/978-94-024-0832-4
- White, L. (1967). The historical roots of our ecologic crisis. Science, 155(3767), 1203-1207. https://doi.org/10.1126/science.155.3767.1203
- Willgens, A., Cooper, R., Jadotte, D., & Lilyea, B. (2016). How to enhance qualitative research appraisal: Development of the methodological congruence instrument. The Qualitative Report, 21(12), 2380-2395. 10.46743/2160-3715/2016.2361
- Willems, E. (1974). Behavioral Technology and Behavioral Ecology. Journal of Applied Behavior Analysis, 7(1), 151-165. 10.1901/jaba.1974.7-151
- Yasin, M. K. (2019). Character Education for Environmental Awareness through the Adiwiyata Program. Islamic Studies Journal for Social Transformation, 3(2), 127-145