

Research Article:

Instilling Islamic Values of Environmental Sustainability Through Experiential Learning: A Case Study of Revealed Knowledge and Natural Phenomena's Students

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ABSTRACT

The goal of Islamic Religious Education (IRE) is to transfer knowledge while developing individuals' values and character. Several Quranic verses explicitly state this, and the Prophet Muhammad (PBUH) also stated that he was sent to perfect good behaviour. Hence, improving students' morale and attitudes based on Islamic values paradigm is a perpetual priority for IRE. Undeniably, the course of adab or akhlak has long been included in the IRE curricula, particularly at the primary and secondary levels, to serve the aforementioned goal. However, it is argued that the course syllabus pays little attention to promoting Islamic values on environmental sustainability. Although Shariah has outlined values and guidelines that can be observed in this matter, environmental issues are typically discussed from a scientific standpoint and appear to be outside the scope of the IRE. Nonetheless, the worsening state of environmental degradation and the frequency of environmental disasters today require a concerted effort. Hence, this paper aims to discuss Islamic values on environmental sustainability and experiential learning as an approach to instilling the values in IRE students. Furthermore, the paper seeks to investigate the impact of experiential learning approach on undergraduate students of Revealed Knowledge and Natural Phenomena course at Academy of Islamic Studies, Universiti Malaya. This study employed a qualitative method. The data was obtained from students' reflections on their participation in Eco-Bazaar @ Masjid, a programme organised for the community of two mosques in Kuala Lumpur to promote 3R practices (reduce, reuse and recycle). Thematic analysis was employed as a data analysis method to find Islamic values that have been instilled in experiential learning of environmental sustainability projects in the case studied. Previous studies have found that experiences play a central role in students' understanding of new knowledge as students are directly engaged in the learning process. This study discovered that experiential learning facilitates students' appreciation of environmental sustainability, as evidenced by their reflections. The findings from this study contribute to the development of knowledge

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regarding Islamic values and environmental sustainability within the context of higher education institution. The approach in the Revealed Knowledge and Natural Phenomena course described in this paper may shed some lights on its implementation. In conclusion, experiential learning should be applied extensively in IRE curricula.

Keywords: environmental sustainability, Islamic values, experiential learning, revealed knowledge, case study

INTRODUCTION

The issue of environmental exploitation and destruction has become a fundamental crisis faced by mankind. It turns out that this situation is very serious and has a negative impact on the survival of the species (Rosyadi & Wulandari, 2021). Malaysia as a developing country is also exposed to the challenges that result in natural disasters, such as floods, landslides, and haze. The Department of Statistics Malaysia reported that the number of disaster victims in Malaysia in 2021 increased almost six double times (208,643) from the previous year which is 35,376 (Department of Statistics Malaysia, 2022a). In 2023, the number of disaster victims did not show a significant decrease with a total of 192,593 victims. As a result, industry players in Malaysia have spent RM3.1 billion for environmental protection in 2021 (Department of Statistics Malaysia, 2022b), and this huge expenditure to some extent has a negative impact on the national economy. Such statistics show that the awareness of part of the community to preserve the environment is still at a low level, while at the same time Malaysia is organising austerity measures to restore the national economy.

In 2015, the United Nations (UN), through the UN International Conference, launched the Sustainable Development Goals (SDG) agenda as a global joint action plan to preserve the well-being of human life for now and in the future (United Nations, n.d). There are 17 goals outlined as a guide for all developed and developing countries to ensure the balance of ecosystems in the global world. The world community began to realise that poverty eradication must go hand in hand with strategies to improve health, education, and efforts to deal with climate change (United Nations, n.d). In short, the SDGs show an emphasis on well-being that is very symbiotic with environmental conservation. It is an idea that is seen as practical in dealing with the issue between the demands of industrial development and environmental protection.

Malaysia as a country fully supports the efforts of the United Nations Educational, Scientific, and Cultural (UNESCO) in implementing sustainable development education and learning (Mahat et al., 2013). As an effort to promote the SDGs, the Malaysian Government began to apply environmental conservation education to children as part of the syllabus in the study curriculum starting at the secondary level. In that sequence, it can be observed that the Secondary School Standard Curriculum (KSSM) in Malaysia has

applied aspects of added value through Cross Curriculum Elements (EMK), such as the value of environmental sustainability that needs to be implemented in the teaching and facilitation process (PdPc) (Kaviza & Bukhari, 2022). Environmental education across the curriculum has been implemented in Malaysia since 1998 (Abdullah et al., 2018). At the same time, the elective subject of Basic Sustainability is also offered at the secondary level to instil green practices practically in the field of green technology and daily life in line with the development and challenges of the 21st century who care about environmental sustainability (Kementerian Pendidikan Malaysia, 2015). The theory and practice of sustainable development education also need to involve the participation of the entire school and the community to create a culture of sustainability (Henderson & Tilbury, 2004). With such initiatives, the skills and potential development of human capital can be improved, thus producing students who are resistant to challenges in the future.

There is no doubt that education and campaigns to preserve the environment are actively carried out by the government, non-governmental organisations (NGOs), and so on (Haliza Abdul Rahman, 2023). However, the theoretical transfer of knowledge through campaigns, lectures, and learning still does not meet the social needs holistically. Therefore, the application of campaigns and environmental education needs to be varied in line with the current need to create awareness in society. Among them, is the application of environmental education and learning through activities and experiences, then injected with Islamic values that demand environmental conservation.

Nowadays, nature and environmental education is so lively and applied in schools and communities. The irony is that the integration of environmental education with Islamic elements is less implemented at the national level even though Islam puts a lot of emphasis on the importance of preserving the environment and provides a clear concept on the matter. Meanwhile, previous studies reported that incorporating spiritual and religious values in environmental education may facilitate transformation and paradigm shift (Azrina Sobian, 2023). This mechanism is believed to provide an authentic learning experience as it links students to their meaning system. Hence, it might catalyse the change in environmental attitude and behaviour (Crowe, 2013).

Hence, this paper aims to discuss Islamic values on environmental sustainability and experiential learning as an approach to instilling the values in Islamic Religious Education (IRE) students. Furthermore, the paper seeks to investigate the impact of experiential learning approach on undergraduate students of the Revealed Knowledge and Natural Phenomena course at Academy of Islamic Studies, Universiti Malaya. This study employed a qualitative method. The data was obtained from students' reflections on their participation in Eco-Bazaar @ Masjid, a programme organised for the community of two mosques in Kuala Lumpur to promote 3R practices (reduce, reuse and recycle).

ISLAMIC VALUES ON ENVIRONMENTAL SUSTAINABILITY

Values are internalised cognitive structures that guide choices by evoking a sense of basic principles of right and wrong (moral values), a sense of priorities, and create a willingness to make meaning and see patterns (trust vs distrust) (Oyserman, 2015). Several previous researchers have conducted studies on values in sustainability issues. Yuriev et al. (2020) define environmental values as an organised set of beliefs about desirable end states that guide the selection or evaluation of environmentally relevant behaviours. Seidel et al. (2018) have conducted a study to develop and empirically test a framework on how personal values and sustainability conceptions affect students' sustainability management orientation (SMO). They found that self-transcendence values translate into more nuanced sustainability conceptions since individuals with self-transcendence values are more likely to conceptualise sustainability beyond their own (narrow) self-interests. In turn, the stronger individuals' sustainability conceptions, the higher the likelihood that they prefer sustainable management practices in their future professional working field (Seidel et al., 2018). In addition, Rincon-Roldan and Lopez-Cabrales (2022) analyse the link between the values that govern the functioning of cooperatives and their sustainability. The study revealed that the perceived support, respect, and responsibility values are strongly related to sustainability and that ability and opportunity-enhancing practices mediate the association of perceived support and responsibility with the sustainability of cooperatives.

Barreto et al. (2013) found various values in sustainability programs that are efficiency, preservation, communication, accountability, respect, fairness, empathy, thoughtfulness, creativity, ability to act, and cooperation. Besides that, Green Project Management (2023) has stipulated principles and values based on sustainable project management, which is to conserve and enhance the natural resources by improving how we develop and use technologies and resources. In addition, Green Newton (2023) follows various core values in the work to combat and adapt to climate change, i.e., optimism and urgency, individual action, systemic change, collaboration, equal justice and integrity. The literature revealed that previous researchers have conducted studies about values in sustainability programmes. However, the studies focus on values from the Western perspective. Islamic values in sustainability programs have yet to be explored.

Sustainability finds its roots in Islamic traditions, originating before the widespread adoption of sustainable development by the United Nations in the latter part of the 20th century (Manoieu et al., 2016). According to Al-Damkhi et al. (2017), Islamic teachings drawn from the *Quran* and *Sunnah* underscore the importance of responsibly managing natural resources, safeguarding them, revitalising land through reclamation and purifying soil, air, and water. Moreover, Moghul and Safar-Aly (2015) argue that environmental principles embedded in classical Islamic law and ethics resonate with modern environmentalism. They propose that under the principles of *Shari'ah*, the Islamic finance sector holds considerable potential to promote environmental causes by investing in green projects, thereby supporting ongoing carbon-conscious endeavours worldwide and within Islamic communities.

Top of Form

The Quran refers to the earth a total of 465 times, signifying significant implications for Muslims' environmental education, particularly regarding the divine guidance for re-evaluating environmental responsibility and stewardship. Quranic teachings on utilising the natural environment are primarily centred on prohibiting hostility and misuse while emphasising sustainable resource utilisation. For instance, Kader et al. (1997) notes that the integration of natural resource development and conservation is evident in the concept of rejuvenating barren land through agriculture, cultivation, and construction. He cites the Quranic verse, "Seest thou not that Allah sends down rain from the sky, and leads it through springs in the earth? Then He causes to grow, therewith produce of various colours..." (Quran, 39: 21), to illustrate this point. Kader et al. (1997) suggests that the lushness of the natural environment serves as a reminder that humanity should engage in productive activities on barren land to sustain healthy living for both humans and biodiversity.

Regarding land use and development, it is incumbent upon humanity to conduct these activities in a manner that draws them closer to the Creator. They must ensure that all land development endeavours adhere to natural laws and do not inflict harm upon the environment or trigger natural disasters, aiming to earn the blessings of Allah (Maidin, 2010). The Quran underscores this responsibility through the term *ista'mara* in the verse: "...It is He who hath produced you from the earth and settled you (*wasta'marakum*) therein..." (Quran, 11:61). According to Quranic interpretation, *ista'mara* in this verse encompasses various meanings such as settle in, thrive, and husbandry. It originates from the root word *'umr*, which denotes life. Related words derived from this root include *'amara* (to cultivate, to make habitable), *'ammara* (to cause to live), and *ma'mur* (flourishing, prosperous, cultivated, and inhabited), all carrying positive connotations of sustaining life. Al-Asfahani (2002) associates the root word *'amara* with *al-'imarah*, defining it as the antithesis of *kharab*, which means damage. Thus, *al-'imarah* denotes the protection of construction structures. Al-Sa'di (2002) elucidates that the phrase *wasta'marakum fiha* indicates the concept of vicegerency, signifying that God has bestowed humanity with abundant material and intangible blessings, enabling them to establish settlements on earth, build homes, engage in agriculture and animal husbandry, and utilise earth's resources in various ways. Consequently, we can infer that any effort aimed at conserving the natural world sustainably aligns with the essence of *al-'imarah* as depicted in the aforementioned Quranic reference.

Unfortunately, the escalating environmental degradation witnessed in the modern era is a direct result of humanity's reckless interference with the natural order of the universe. The Quran (30:41) has already forewarned humanity of this situation, as Allah states, "mischief has appeared on the land and sea, because of (the deed) that the hands of man have earned, that (Allah) may give them a taste of some of their deeds; so that they may turn back (from evil)." Commenting on this verse, al-Jalalayn (in al-Suyuti & al-Mahalli, 2007) explains that God's mention of "corruption (*fasad*) has appeared on land" depicts barren land suffering from reduced rainfall, leading to diminishing vegetation. Asad (2000)

further elaborates that *fasad* in today's context can encompass various ecological crises, such as the endangerment of biodiversity due to the "poisoning of plant and marine life" and the "extinction of many animal species." Additionally, McFall-Johnsen (2019) notes that the natural environment faces severe challenges, such as soil, water, and air pollution stemming from industrial and urban waste. He affirms that the fashion industry alone contributes to 10% of all global carbon emissions, ranks as the second-largest consumer of the world's water supply, and pollutes oceans with microplastics.

The earlier Quranic admonition regarding 'corruption' in Surah al-Rum (30:41) encompasses all forms of environmental degradation caused by human actions. With the pressing threats of climate change and the impacts of global warming, humanity must treat the environment with care and reverence. Efforts should be made by all to minimise waste and avoid polluting our planet. Bensaid et al. (2018) argue that spirituality plays a crucial role in refining Muslims' awareness and understanding of their role as stewards of the earth, thereby enhancing their capacity for development and environmental sustainability. They suggest that spirituality fosters a deeper appreciation of sustainability and a sense of responsibility towards nature among Muslims, with the potential to inspire action against environmental degradation. Similarly, Grine et al. (2013) underscore the importance of maintaining a sense of devotion to the divine, spiritual discipline and moral integrity in sustaining a balanced development. They advocate for a vision of sustainability rooted in Islamic principles that promote positive thoughts, lifestyles, and actions aimed at pleasing Allah while fostering continuous moral growth and reform. The Muslim perspective on sustainability is shaped by their intellectual, spiritual, and social experiences, informed by their interpretation and practice of revelation. Central to Muslim conceptions of sustainability is the ongoing task of perfecting the human self and conscience, influencing their approaches and attitudes towards sustainability.

The success of the environmental sustainability initiative be determined by implementing the following Islamic values namely work for Allah, *amanah* (trust), cooperation, *musyawarah* (consultation), *istiqamah* (perseverance), *itqan* (competent), *ihsan* (courtesy), grateful and welfare.

Work for Allah

Allah created humans as caliphs or vicegerents to prosper this earth. God has bestowed various facilities and favours on mankind. The word of Allah SWT in verse 20, Surah Luqman which means: "Do ye not see that Allah has subjected to your (use) all things in the heavens and on earth, and has made His bounties flow to you in exceeding measure, (both) seen and unseen?" (Surah Luqman, 31: 20).

As a vicegerent, humans need to preserve this nature as best as possible so that it is spared from pollution that will bring environmental degradation. This is to ensure a safe environment for present and future generations. Humans should intend to work to

preserve the environment for Allah who has created this world. The parties involved should put the value of working for Allah into practice to make the environmental sustainability program a success. Therefore, all promises and efforts in carrying out activities must be made sincerely to accomplish the goals that have been established for the environmental sustainability programme.

All parties concerned will be highly motivated to work if they have the intention to do it because of Allah. This is due to their knowledge that the effort will not only benefit mankind and other creatures around the globe but also result in a favourable reward in the hereafter. Islam promotes hard effort among its adherents. According to a hadith attributed to the Prophet Muhammad (PBUH): “Whoever seeks halal sustenance to keep himself from begging and to provide for his family and be able to assist his neighbours, he will undoubtedly come on the Day of Judgement with his face shining like the moon on the sky.” (Narrated by Al-Baihaqi in Syu’ab al-Iman, 9890).

***Amanah* (trust)**

The most significant superior virtue in Islam is the value of *amanah*. The effectiveness and accomplishment of the environmental sustainability program’s implementation can be influenced by the practice of *amanah* values. In this context, *amanah* means to meticulously do the assignment following the established plans and regulations. A Muslim who has a high awareness or inclination towards the environment will try hard to carry out the trust or *amanah* to preserve the environment. This has similarities with the importance of self-transcendence values according to Western scholars in creating an individual’s orientation or tendency towards environmental preservation.

Amanah refers to properly utilising all resources, including those in the form of people, money and infrastructure allocated for environmental sustainability programme. The funds at stake should be used to support the programme rather than for selfish purposes. Muslims are expected by Islam to be accountable for the trust placed in them by everyone. The word of Allah SWT in verse 38 of Surah Al- Mudathir which means: “Everybody is accountable for their own actions.”

Islam likewise encourages hiring strong, reliable individuals as employees, as Allah SWT stated in Surah Al Qasas verse 26: “O my father! one of the two (ladies) exclaimed. Make him an employee for us; in fact, a strong and reliable individual is the ideal candidate for the position.”

The understanding of this value encourages a person to preserve nature and its treasures as a means of obligation and religious duty from Allah. The main principle which guides the Islamic perspective on environmental sustainability is the concept of trusteeship. As a caliph of Allah in the world, mankind should protect nature and live harmoniously with other creations (Zafar, 2014).

Cooperation

A high level of cooperation amongst all stakeholders is required for the environmental sustainability programme's work to be completed quickly and efficiently. Additionally, it takes a lot of time and effort to execute the programme. The value of cooperation amongst the parties concerned must, therefore, be practised for the work movement to be supported by all parties. The workload can be dispersed in an organised and systematic way through teamwork. Additionally, the discussion sessions arranged to encourage cooperation can spark a variety of contributions and perceptive notions that serve as the impetus for the implementation of a successful environmental sustainability programme. Islam requires its adherents to work together and support one another. Allah SWT's declaration in verse 2 of Surah al-Maidah which reads: "And support one another in acting virtuously and piously but refrain from aiding one another in committing faults and transgressions. And be afraid of Allah, for He punishes severely."

Giving is an excellent Islamic value to live by and will be rewarded by Allah SWT. The word of Allah SWT in verse 85 of Surah an-Nisa' which means: "Anyone who gives good intercession will receive a share (reward) from it, and whoever gives bad intercession will receive a share (sin) from it and remember that Allah is Almighty over everything."

***Musyawarah* (consultation)**

Musyawarah must be practised prior to putting the environmental sustainability programme into action to allow for effective communication and interaction between the stakeholders and surrounding communities. This will facilitate effective communication and help the environmental sustainability programme get off the ground. To ensure that crucial information and facts are accurately communicated to the intended party, all parties concerned must communicate effectively and sensibly. Making the committee members and surroundings communities of the environmental sustainability programme feel valued would encourage them to think and work harder to make the programme a success. Islam encourages people to think things out. Verse 38 of Surah Al-Shura contains Allah SWT's revelation: "And (for) those who heed God's call and offer prayers, while their affairs are determined through discussion among themselves, and they used some of the sustenance We provided for them."

Effective communication is another theme in Islam. The word of Allah SWT in verse 159 of Surah al-Imran which means: "So, because of God's mercy (shown to you, O Muhammad), you have been kind to them, whereas if you had been impolite and callous, they would have fled from you."

***Istiqamah* (perseverance)**

The success of the environmental sustainability programme depends on the value of *istiqamah* or perseverance. This is since these beliefs encourage Muslims to work tirelessly and to never waver in their commitment to achieving the goals that have been established. Not to mention the environmental sustainability programme, which need time and a certain amount of work to be successful. Additionally, the implementation of the programme is not without difficulties. The difficulties could be brought on by human problems, a lack of facilities, or a lack of funding.

In addition, dealing with stakeholders can present difficulties. To ensure that everyone concerned is always steadfast in the successful implementation of the environmental sustainability programme, it is necessary in this situation to practise the value of *istiqamah*. Islam requires its adherents to lead steady lifestyles. The following hadith from the Prophet Muhammad (PBUH) discusses *istiqamah* (hadith narrated by Imam Muslim, 2000): “When asked what kind of practice Allah SWT prefers, Prophet Muhammad (PBUH) replied, “Continuous practise, even if it is little.”

***Itqan* (competent)**

It is important for all parties participating in the implementation of the environmental sustainability programme to uphold the value of *itqan*, which promotes work efficiency. Efficiency in completing the assigned responsibilities will lead to improved work performance and further boost the implementation of the programme. In this regard, the qualifications, talents, abilities, and experience of potential candidates can be taken into consideration when choosing the members of the environmental sustainability programme committee. The abilities possessed by the committee members can be used fully to mobilise the activities of the environmental sustainability programme effectively and quickly.

Everyone who are committed to work and show high expertise and abilities are praised in Islam. Islam also likes workers who do a good job. The hadith of the Prophet (PBUH) which means: “Indeed Allah likes when one of you does a job, he does it well, perfectly and carefully”. (Narrated by Al-Baihaqi in Syu’ab al-Iman, no. hadith 4932).

***Ihsan* (courtesy)**

The virtue of *ihsan* is just as significant in carrying out the environmental sustainability programme. *Ihsan* refers to performing a task with excellence and setting goals for exceeding minimal requirements. The parties involved in the programme must put in more effort than was anticipated when project activity planning was done. Productivity and work performance will rise by going above and beyond the call of duty. This will tangentially improve the success of initiatives relating to the environmental sustainability effort. To inspire the parties engaged to make a high commitment and then be willing to

work beyond the set targets, the committee and surrounding communities need to perform their respective responsibilities. Islam exhorts its adherents to labour hard since Allah does truly observe their labours. In verse 105 of Surah Al Taubah, Allah says: “And say, “Work, then Allah will see your work, so will His Messenger and the believers, and you will be returned to (Allah) the Knower of the unseen and the manifest, then He will tell you what you have do it.”

Grateful

The importance of gratitude is essential in environmental sustainability programme practices. This is since this value will make it second nature to be appreciative of the programme’s surroundings and its resources. For instance, if the community are appreciative of the availability of resources such as water, they will utilise it wisely. To prevent the depletion of water supplies, the environment must be protected in this regard. For mankind, Allah Taala created a variety of favours in this world. In verses 53–54 of Surah Taha, Allah says the following: “(God) who has made the earth an expanse for you, and made roads on it for you, and who sends down water (rain) from the sky.” Then We grew with it (the rainwater) all kinds of plants. Eat and feed your animals. Truly, in such a thing, there are signs (of Allah’s greatness) for those who comprehend.”

Muslims are obligated to express gratitude to Allah for all their benefits. Allah’s revelation in verse 12 of Surah Al-Jasiah which means: “It is Allah who subdues the sea for you so that ships may sail on it by His command, and so that you may find some of His bounties and that you may be grateful.” Allah’s word again in verse 152 of Surah Al-Baqarah, which means: “So remember Me, I will also remember you. Be grateful to Me, and do not deny Me.”

Next is the word of Allah in verse 7 of Surah Ibrahim, which means: “And (remember) when your God announced, “Indeed if you are grateful, I will increase (favours) to you, but if you deny (My favours), then surely My punishment will be very severe.”

Welfare

Welfare must be taken into consideration when conducting the environmental sustainability programme. Priority should be given to the welfare of the congregation and the neighbourhood surrounding the programme venue. Therefore, the environmental sustainability programme should be implemented seriously to save the environment. For the neighbourhood to feel welcome and enjoy visiting the venue to take part in the activities held there, the venue’s splendour and cleanliness must also be preserved. Second, care must be given to the well-being of committee members and volunteers for the programme. This is so that the human resources that are the engine of the environmental sustainability programme’s activities can be identified.

Planting trees, maintaining the venue's cleanliness and orderliness, promoting recycling, and operating second-hand stores are all ongoing operations that demand a high level of devotion. In this regard, it is possible to ensure the welfare of committee members and volunteers, for instance, by providing encouragement and praise, appreciation certificates, gifts, and food. Good deeds like this are praiseworthy and prioritised in Islam. Islam commands its adherents to do good deeds as in the word of Allah in verse 7 of Surah al-Zalzalah, which means: "So whoever does good deeds the weight of a particle, it will be seen (in his notebook)."

EXPERIENTIAL LEARNING AND ITS SIGNIFICANCE IN INSTILLING VALUES AND PROMOTING POSITIVE ENVIRONMENTAL ATTITUDE

Experiential learning is defined as 'learning-by-doing' or 'hands-on', which integrates the theoretical and practical elements of learning (McCarthy, 2010; Austin et al., 2015; Kohonen, n.d). In this learning approach, students are engaged actively in the learning process compared to traditional teacher-centric learning, which usually takes place in a classroom. Experiential learning may take place beyond the classroom, where students are directly involved with the phenomenon being studied, instead of merely watching or reading, hearing, or thinking about it (Austin et al., 2015; Kohonen, n.d).

In the context of environmental education, it is argued that experiential learning serves as the best approach to instil values and promote pro-environmental behaviours among students. This is based on Liu et al. (2020) finding that mere knowledge is insufficient to promote environmentally friendly actions. However, what is referred to as environmental knowledge is not limited to factual knowledge about ecosystem structures, functions, and processes. Some researchers maintain that environmental knowledge includes several dimensions, as portrayed in Figure 1.

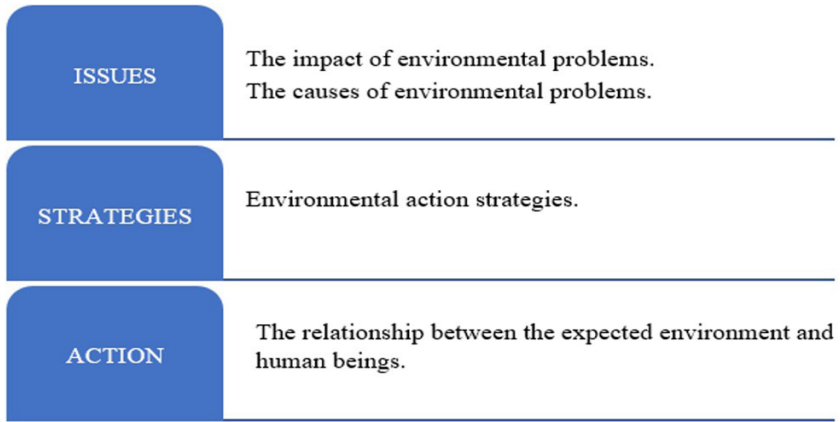


Figure 1. Dimensions of environmental knowledge (Liu et al., 2020)

From Figure 2, it can be understood that factual knowledge about ecosystem structures, functions, and processes is part of the basic knowledge to understand environmental issues. Hence, it is still far from enough to promote a positive attitude among students towards the environment. Liu et al. (2020) insisted on two more dimensions of environmental knowledge that students need to master, which include environmental action strategies to solve environmental issues and the impact of the action on the environment and human beings. The same emphasis is asserted by Maurer et al. (2020) in their study, as depicted in Figure 2.

Maurer et al. (2020) support Liu et al. (2020) in their findings with slightly different terms. They also resounded Liu et al. (2020) that factual knowledge, as described in Figure 3, does not have a direct relationship with environmental behaviour and is not expected to influence behaviour. They maintain that action-related knowledge and effectiveness knowledge may affect behaviour as both improve one's capability to act pro-environmentally. Nevertheless, based on the previous finding, environmental knowledge can promote pro-environmental behaviours only when it stimulates sentiment and is absorbed and internalised by individuals. This means that environmental knowledge may only transform people who already care about the topic (Liu et al., 2020) or have a positive attitude toward environmental sustainability. To conclude, the causal relationship between environmental knowledge and pro-environmental behaviours or action (Liu et al., 2020) are as in Figure 3.

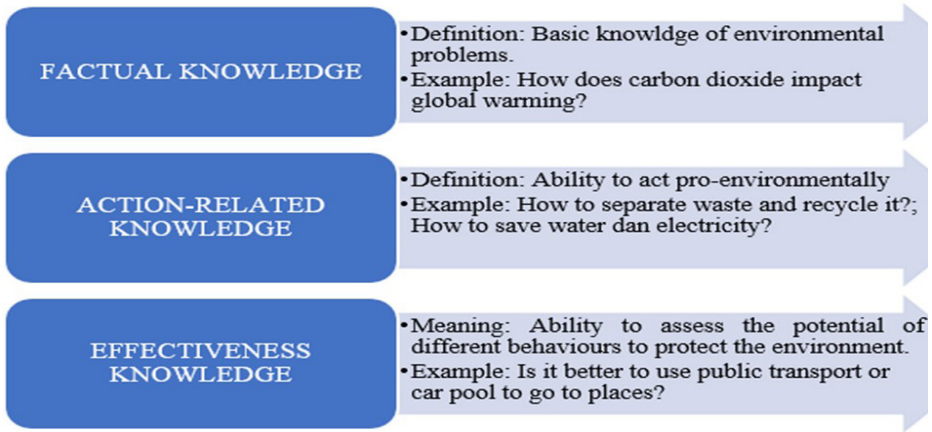


Figure 2. Types of environmental knowledge (Maurer et al. 2020)



Figure 3. Causal relationship between environmental knowledge and pro-environmental behaviour

Figure 3 above describes the finding of previous literature that environmental attitude has a direct impact on pro-environmental behaviour. This implies that environmental education requires more than transferring knowledge to students as in traditional classroom settings. Besides, it must be strategised to enhance a desired environmental attitude. What is meant by attitude is one's opinion or feeling about the environment. It is also defined as the knowledge, appreciation, and sense of responsibility towards the natural environment (Taff et al., 2010; Bogner, 2018). Many researchers discovered that affective domain learning in the outdoors had a significant impact on the improvement of environmental appreciation among students. Among the learning activities suggested are walking, touching and sensing the natural environment (Taff et al., 2010).

Hence, experiential learning can play a significant role in enhancing positive attitudes towards sustainability due to its holistic approach that utilises the cognitive, affective, and psychomotor domains of students. Experiential learning provides a great medium to improve the affective domain of learning compared to other approaches, which emphasis more on cognitive or psychomotor. The importance of the affective domain in transforming students' attitudes is evident in the set of skills aspired in the domain portrayed in Figure 4 as follows:

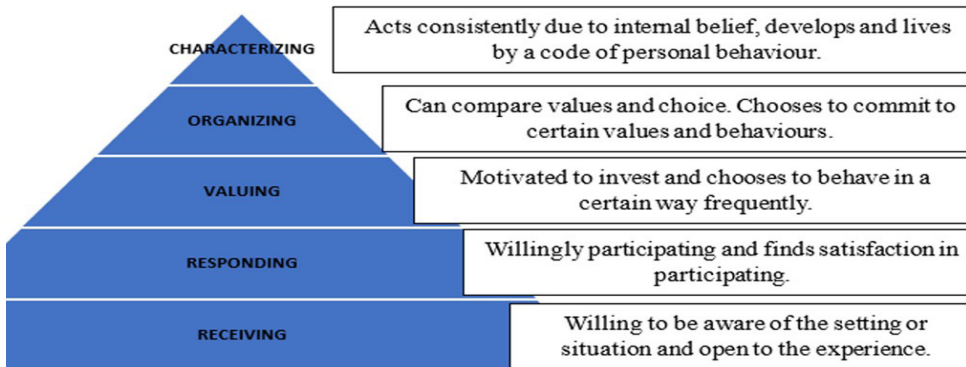


Figure 4. Five levels of affective domain of learning

Commitment to certain aspired values is the aim of the affective domain of learning, as depicted in Figure 4. The highest goal of the affective domain is developing and transforming students to live by a code of desired behaviour. In the environmental education context, this has been proven by de Vries and Petersen (2009) who found that a person's behaviours and life goals, including their intention and drive to perform, are determined by their values. Values founded on a lifelong experience with parents, neighbours, community leaders, and institutions and all forms of formal and informal education are a critical link between values and behaviours.

A positive attitude towards environmental sustainability must be enhanced in environmental education to foster behavioural transformation of students. It can be done by instilling related values, as discussed in the previous subtopic, by using the experiential learning approach. Experiential learning may involve various activities in formal or informal settings. In formal or educational institution setting, the transformation of experience to meaningful knowledge may be facilitated through activities such as watching environmentally friendly movies, portfolios, reflective essays, role plays, drama activities, games and simulations,

experimental activities, case studies, models, analogies and theories construction and many more (Austin et al., 2015; Liu et al., 2020; Kohonen, n.d).

Whereas the example of experiential learning in an informal learning setting are such as internships in business and service organisations, work and study assignments, clinical experience, international exchange, visiting nature reserves and volunteer programmes (Austin et al., 2015; Liu et al., 2020; Kohonen, n.d). Robina-Ramírez and Medina-Merodio et al. (2019) affirmed that non-formal education is considered a crucial approach to addressing environmental issues as it fills the formal education gap regarding environmental knowledge.

In the experiential learning process, students are engaged actively. Thus, most experts agree it can optimise the student's learning (McCarthy, 2010). Active learning is also a powerful tool to promote transformation (Crowe, 2013). Furthermore, there are many positive outcomes found in experiential learning as it merges experience, perception, cognition and behaviour (McCarthy, 2010). This is apparent in experiential learning theory which contains four cyclic processes: (i) experience, (ii) reflection, (iii) abstract conceptualisation and (iv) action (Kohonen, n.d). Hence, this approach has been identified as a high-impact educational practices which enhance student retention and engagement (Austin et al., 2015). The quality of knowledge acquired depends on the quality of experience and reflection upon the experience (Fowler, 2008).

Students undergone an experiential learning approach have been reported with readiness for self-directed learning. Previous researchers also maintained that experiential learning assists students in understanding the application of a theory learned and helps improve students' reasoning and other skills as well as self-confidence, personal civic and professional development. Additionally, experiential learning benefits students by increasing their collaboration and networking with various parties involved in the learning process and thus providing better employment opportunities (Fowler, 2008; Austin et al., 2015). With the knowledge and skills acquired throughout the learning process, students are better prepared to face real-life situations and issues in the future, including environmental sustainability challenges.

IMPACT OF EXPERIENTIAL LEARNING IN REVEALED KNOWLEDGE AND NATURAL PHENOMENA COURSE ON STUDENTS' ATTITUDES TOWARD ENVIRONMENTAL SUSTAINABILITY

Experiential Learning in Revealed Knowledge and Natural Phenomena Course

Revealed Knowledge and Natural Phenomena is an undergraduate course taught by Dr. Asmawati Muhamad at the Academy of Islamic Studies, Universiti Malaya. This specific course is designed for students enrolled in the Applied Science with Islamic Studies

Programme. It serves students who are engaged in a double major program encompassing Islamic Studies and Pure Science disciplines such as Biology, Chemistry, Physics, and Environmental Science. In general, this course discusses natural phenomena issues in the light of Islamic Revealed Knowledge, i.e., Quran and Sunnah. Nevertheless, the discussion also includes natural phenomena from the modern science perspective, covering the following course learning outcomes as in Table 1.

Table 1. Course learning outcome

No.	Course learning outcomes	Domain of learning
1.	Explain the relationship between revelation and natural phenomena.	Cognitive: Comprehension
2.	Identify Quranic verses related to natural phenomena (i.e., signs behind the science).	Cognitive: Application
3.	Relate revealed knowledge with the science activities.	Affective: Valuing

This course has addressed two cognitive domains of learning, as delineated by Bloom’s Taxonomy, a renowned learning theory in the realm of education established by Bloom, Engelhart, Furst and Krathwohl in 1956. The first objective of this course entails the cognitive aspect of comprehension. It enables students to understand and interpret information derived from textual studies of Islamic revelation and observations of natural phenomena. The second facet within the cognitive domain of learning covered in this course is application, i.e., discovering Quranic verses or Prophetic traditions that related to natural phenomena as indications or signs underlying scientific knowledge. The final learning outcomes of this course also encompassed the affective domain of learning, specifically focusing on the aspect of valuing. Students are anticipated to demonstrate value for a particular concept from the Quran and Sunnah perspective by articulating its significance or meaning. For example, students could write reflective essays regarding a significant contemporary scientific matter from an Islamic viewpoint that deeply interests them, articulating and advocating for their perspective.

Throughout the fourteen weeks of two-hour lecture sessions in Semester 2, 2021/2022, the discourse essentially deliberated on environmental sustainability issues for five weeks. The discussion of natural phenomena in the light of contemporary science is very broad. Therefore, it was focused on selected topics that have clear indications in the Quran and Hadith. The topics covered are outlined in Table 2.

The Islamic values discussed in the aforementioned lecture series, as outlined in Table 2, are conveyed through affirmations of theoretical aspects concerning environmental sustainability from an Islamic standpoint. For deep reflection and understanding of this course’s portrayal of environmental sustainability issues, students were assigned to be jointly involved in organising Eco-Bazaar@Masjid (EBM) Programme at two mosques in Kuala Lumpur with the theme of “Preloved *Raya*” (<https://www.mkn.gov.my/web/ms/2022/04/18/programme-eco-bazarmasjid-preloved-raya/>). The first EBM was

conducted at Masjid Al-Ikhlasih, Pantai Dalam, Kuala Lumpur, on 17 April 2022. The second EBM was conducted at Masjid Ar-Rahimah, Kampung Pandan, Kuala Lumpur, on 24 April 2022. It is based on the concept of Eco-Market within a mosque compound. It promotes 3R (reduce, reuse and recycle) practices as well as addresses the negative impacts of the “Fast Fashion Industry” on environmental sustainability. Furthermore, the program also emphasised the collection of used cooking oil for recycling.

Table 2. Discussion of natural phenomena and environmental issues in the course

Week	Topic	Islamic values addressed
2	Introduction to Revealed Knowledge and Natural Phenomena	<ul style="list-style-type: none"> • Submission to Allah, the only Creator and Sustainer of this Earth and all creatures (<i>tawhid</i> principle).
3	Major themes in the Quran related to Natural Phenomena	<ul style="list-style-type: none"> • Thankfulness and gratefulness to Allah for all His bounties in creating natural resources and providing sustenance for mankind and other creatures.
4	Contemplation of Quranic verses and observational signs: A scientific interpretation approach	<ul style="list-style-type: none"> • Islamic revelation as a source of reference for scientific knowledge advancement.
5	The Quranic reminders about fasad (corruption on earth): Reflections on stories within the Quran	<ul style="list-style-type: none"> • Concept of <i>ihsan</i>
6	The role of humanity as <i>khalifah</i> (stewards) in preserving environmental sustainability	<ul style="list-style-type: none"> • Concept of <i>khalifah</i> and <i>amanah</i>

This programme is a collaborative research work under the purview of Universiti Malaya Sustainable Development Centre (UMSDC) with other stakeholders, i.e., Department of Federal Territory Islamic Affairs (JAWI), Malaysian Green Technology and Climate Change Corporation (MGTC), Masjid Al-Ikhlasih Committee Members, Masjid Ar-Rahimah Committee Members, and Imarah Eco-Friends, a student’s club in Academy of Islamic Studies, Universiti Malaya. This programme aims to cultivate a spirit of sustainability advocacy and to encourage a pro-environmental behaviour change among the participants and community involved. Within this program, students participate as volunteers and engage in various roles, as illustrated in Table 3.

Table 3. Practical role associates to students' involvement at Eco-Bazaar@ Masjid Programme

No.	Role	Sustainability impacts
1	The students participate as organising committee members. Top of Form	<ul style="list-style-type: none"> • Training these students to become systematic and organised volunteers for sustainability initiatives. • Capacity building
2	Spreading awareness of 3R campaigns across diverse social media platforms. #LestariShop #DonatePreloved #Sustainability	<ul style="list-style-type: none"> • Educating on the significance of 3R practices through knowledge transfer. • The objective of this campaign is to collectively reduce textile waste and encourage a sustainable lifestyle.
3	Collecting gently used items, especially clothing, from the UM neighbourhood and selected mosques community for donation to Lestari Shop, the preloved collection centre initiated by the Ijarah Eco-Friends Club.	<ul style="list-style-type: none"> • The gently used items can find new homes and support a worthy cause as well as prolong the life cycle of the goods.
4	Sorting and categorising the gathered preloved items.	<ul style="list-style-type: none"> • Worn-out and damaged clothes are not sold at EBM; instead, they are sent for recycling.
5	Setting up booths in the mosque compound to sell preloved items during EBM.	<ul style="list-style-type: none"> • Each item is sold at a lower price compared to bundle stores outside. • To promote community engagement in the circular economy. <ul style="list-style-type: none"> • Top of Form
6	Gather used cooking oil from EBM visitors and food stall vendors in the mosque neighbourhood.	<ul style="list-style-type: none"> • Students assist in weighing the used cooking oil brought by visitors. Each kilogram of used cooking oil is valued at RM2.00. All the used cooking oils are then sold to an appointed vendor.

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Table 3 (Continued)

No.	Role	Sustainability impacts
7	Record the sales in kilogram unit and RM for the UI Green matric reporting purposes.	<ul style="list-style-type: none"> Teaching students about data collection for GHGs reduction monitoring.
8	Participating in officiating ceremony of the program which includes awareness talk from experts in environmental sustainability from the Islamic perspective.	<ul style="list-style-type: none"> Knowledge transfer.
9	Assist the mosque committee in organising a zakat-giving ceremony for the needy (<i>asnaf</i>) in the local community.	<ul style="list-style-type: none"> Targeting specific groups within the mosque community to benefit from the sale of EBM.
10	Conducting interviews with stakeholders and participants.	<ul style="list-style-type: none"> Data collection for writing reflective essays.
11	Taking notes on observations made during the EBM.	<ul style="list-style-type: none"> Data collection for writing reflective essays.
12	Capturing photos and recording a short video during the EBM	<ul style="list-style-type: none"> Documenting data for future reference.

From the perspective of environmental education, this course had applied theoretical and practical elements of learning as shown in Table 4.

Table 4. Elements, approach, and types of environmental knowledge in Revealed Knowledge and Natural Phenomena course in Academy of Islamic Studies, Universiti Malaya

Elements	Approach	Types of environmental knowledge
Theoretical	Class lecture	Factual knowledge Islamic values of environmental sustainability
Practical	Volunteer programme	Action-related knowledge

Impact of Experiential Learning on Students' Attitudes Toward Environmental Sustainability

To investigate the impact of experiential learning on students' attitudes toward environmental sustainability, this research has specifically designed a qualitative study on 46 undergraduate students who took the coursework, i.e., Revealed Knowledge and Natural Phenomena. This study involved a high number of informants, namely 46 students who were involved as volunteers in the 2nd Eco-Bazaar@Masjid (EBM) Programme. The high

number of informants has contributed to rich and comprehensive data and has increased the reliability of this study.

Assessment of the course learning outcome for this course includes reflection writing regarding lessons learned from their direct involvement and engagement with the community throughout Eco-Bazaar@Masjid Programme. The reflection writing was collected and analysed to evaluate the impact of experiential learning to the students' behaviour towards environmental sustainability. Thematic analysis from the reflective writings of the eight groups was used to examine Islamic values that emerged during their engagement in the fieldwork.

Findings from the data analysis revealed that there are six values reflected in students' reflective essays writing namely work for Allah, *amanah*, cooperation, *ibsan*, grateful and welfare. The values are presented in Table 5, as follows:

Table 5. Islamic values reflected in Revealed Knowledge and Natural Phenomena course students' writing

Values	Students' reflection
Work for Allah	<p>Group 4: "We had the opportunity to witness the genuine enthusiasm of the contributors who earnestly donated their items. The time and effort put in by the contributors to prepare their donations were strongly felt. This is because we were directly involved in assisting the contributors during the process of handing over the donation items to the committee members involved at the Lestari Shop, Academy of Islamic Studies."</p> <p>Group 5: "We can feel and see the immense joy that can be shared with others through sincere (<i>ikblas</i>) contributions. This can be observed through the smiles of the buyers who can purchase clothes at incredibly low prices, and some even receive them for free. Those who contribute their items do not expect anything in return; rather, they provide their clothes and items for free to be sold at very low prices to those who are in greater need."</p>

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Table 5 (Continued)

Values	Students' reflection
<i>Amanah</i>	<p>Group 2: "The teachings of Islam call upon its followers to take responsibility for their actions and to practice moderation in all life aspects. Indeed, the relationship between nature and humanity is so intertwined that Allah SWT Himself affirms that every disaster that befalls the Earth is a result of human wrongdoing. The creation of humans as stewards on earth does not imply absolute freedom to act, but rather as caretakers and promoters of well-being on earth."</p> <p>Group 5: "It is evident that this programme fosters a sense of environmental sustainability and encourages a shift in societal behaviour towards adopting a sustainable lifestyle (reduce, reuse and recycle) through responsible utilisation of natural resources. The connection between the EBM programme and this coursework (Revealed Knowledge and Natural Phenomena) can be seen as this programme becomes a means to practice the command of Allah in the Quran, which instructs mankind to care for the environment."</p> <p>Group 8: Islam places great emphasis on preserving the environment to the extent that the Quran emphasises not causing harm to the earth. We should take heed that the degradation of the earth has a negative impact on human life itself."</p>
Cooperation	<p>Group 3: "We could feel the enthusiasm and dedication of numerous parties involved in collectively recycling clothing while contributing to charity. Additionally, we noticed that people today are more open to the concept of preloved clothing. This was evident as they felt comfortable and unashamed to buy preloved items, with some even purchasing 9-10 preloved clothing pieces. We were also touched by the collaboration displayed between JAWI, mosque committee members, and the Universiti Malaya community in making this programme successful."</p> <p>Group 5: "During the programme, we also had the chance to meet remarkable individuals such as Mr. Abbas Bin Mohamed Khatib, the Chairman of Ikhlasiah Mosque, who shared valuable knowledge in his welcoming speech. It helped raise awareness among the community about the importance of practising a sustainable lifestyle through responsible utilisation of natural resources."</p> <p>Group 8: "Collaboration among stakeholders is key to success. This programme represents a commendable effort to restore the environment and directly benefit society. Therefore, cooperation between universities like UIA, UPM, UKM and others is highly encouraged to attract a wider range of participants, particularly among students and young people."</p>

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Table 4 (Continued)

Values	Students' reflection
<i>Ihsan</i>	Group 7: "We help spread information on used cooking oil collection for the EBM, in order to raise awareness among the public in the neighbourhood area about the importance of used cooking oil to be recycled . We share posters on social media platforms such as WhatsApp, Facebook and Instagram, which are the primary communication channels today. As a result, many individuals (most of them are food vendors) came to sell their used cooking oil at the EBM programme."
Grateful	<p>Group 1: "Through preloved sales activity, the community is encouraged to be less extravagant, not overly follow the latest fashion trends, and practise moderation in clothing purchases."</p> <p>Group 2: As a result of these awareness campaigns, the public is informed about the current issue of textile waste in Malaysia. Consequently, this can instil a more mindful approach to shopping and discourage wasteful practices that ultimately lead to negative consequences for both consumers and the environment. The current adult millennial generation experiences a more luxurious lifestyle compared to previous generations. Therefore, this millennial generation must be provided with appropriate education so that they can appreciate the natural resources we have for the sake of future environmental sustainability and balance.</p> <p>Group 5: "For us as well, who have tirelessly collected clothes from relatives, our fatigue fades away upon seeing the visitors of the EBM programme happily receiving those clothes. This programme also generates a sense of gratitude among those who donate used clothes, as they can share their blessings and enjoyment with others. Top of Form One of the most impactful experiences for us was when the elderly or senior citizens appeared joyful and excited to purchase new clothes. In fact, some of them were so enthusiastic that they bought clothes to gift to their grandchildren for the upcoming festive season (Eid al-Fitr). During the programme, we were also greatly entertained and delighted by the behaviour of a young boy who was thoroughly enjoying selecting items at the sales booth. What touched us deeply was learning that this young boy was not just shopping for himself; he was also joyfully choosing clothes to buy and gift to his mother."</p>
Welfare	Group 1: "This programme can foster community awareness and a sense of moderation in buying clothes, simultaneously encouraging clothes donation that can still be used by those who are in need instead of throwing them away and causing piles of textiles at the landfill."

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Table 4 (Continued)

Values	Students' reflection
Welfare	<p>Group 3: "This programme has fostered the spirit and attitude of giving charity among students and the local community. Additionally, this programme encourages the public to collectively engage in environmental preservation through the concept of reusing usable items. Furthermore, the EBM programme serves as a catalyst motivating APIUM and UM members to contribute used clothing and items, thereby reducing the waste of natural resources, decreasing landfill waste accumulation, and fully utilising reusable goods. One of the benefits our group gained is the heightened awareness of donating recyclable clothes to orphanages and those in need. This is one of our efforts to mitigate environmental pollution stemming from the fast fashion industry. Since the inception of this programme, we have vividly recognised the significance of recycling practices."</p> <p>Group 3: "Through this programme, we realised that personal involvement in donating pre-loved items not only brings joy to the recipients but also instils a sense of gratitude in oneself towards the environment and the well-being of the community. We had the opportunity to witness various reactions from visitors, mostly from the community residing near Al-Ikhlasih Mosque. Visitors were visibly excited to shop for affordable clothing. Moreover, some praised the efforts by EBM and JAWI, appreciating the charitable sales atmosphere."</p>

The impact of these values on students' behaviours is manifested in their reflection essays writing. For example:

Group 6: "Our involvement as students of this coursework (Revealed Knowledge and Natural Phenomena) has provided us with valuable experiences and opened our eyes to the importance of environmental conservation in any way we can. We are deeply grateful for being given the opportunity to participate in the EBM programme, and we hope that similar programmes can be carried out again in the future."

Group 7: "Among the benefits we get from this program is that the Eco-Bazaar at the mosque has raised our awareness about the importance of practising the 5R concept: refuse, reduce, reuse, recycle and recover. For instance, most of the clothes sold at the program are still in excellent condition despite of being used. This indicates that a portion of Malaysian society buys new clothes not because of their old clothes are worn out and unusable, but because they want to follow current fashion trends. Thus, we must adopt the concept of refuse, meaning refraining from excessive clothing purchases, even when attractive sales promotions are offered."

Group 7: "Islam places great emphasis on preserving the environment to the extent that the Quran emphasises not causing harm to the earth. We should take heed that the degradation of the earth harms human life itself."

Muhamad et al. (2020) underline the importance of instilling the value of trusteeship (*amanah*) in Muslims from a young age. This value is crucial in the ethical realm and plays a vital role in sustaining human-nature interactions. Concerning environmental awareness, individuals nurtured with the value of trusteeship are inclined to handle natural resources responsibly. Whether they are engaged in laboratory testing, farming, cattle ranching, forestry, or marine tasks, they are mindful of their attitudes and practises to avoid engaging in destructive acts and their consequences. Therefore, the protection and preservation of the environment are not solely pursued for the sake of sustainability goals but are also regarded as fulfilling God's provision on trusteeship.

Furthermore, experiential learning from the participation of students in Eco-Bazaar@ Masjid Programme has enlightened the students with action-related knowledge which could facilitate pro-environmental behaviour among students. This is explicit in student's reflections:

Group 2: "One step to avoid textile waste, as based on the Eco Bazaar Mosque Programme, is to organise a charitable sales program to assist individuals in need to have access to everyday clothing. This noble effort involves creating a platform for anyone to donate clothing and home items such as curtains, glassware, and containers used during festive occasions. This effort aims to reduce the surplus of usable clothing from donors while also nurturing empathy and contentment (*qana'ah*) in our daily lives."

Group 7: "One of the benefits we gained from attending this program is learning that used cooking oil can be recycled. Previously, most of us only knew that recyclable materials were limited to items like paper, plastic, glass, and metals like iron and aluminium. Through our interviews with the vendor who collects used cooking oil, we learned that recycled cooking oil can be used to produce biodiesel, soap, and candles. The vendor also mentioned that frequently disposing of cooking oil not only harms the environment but also disrupts drainage systems, especially in residential areas."

Group 8: "The Eco Bazaar @ Masjid (EBM) programme has provided significant exposure related to the Revealed Knowledge and sustainability science application. Through this programme, participants gain knowledge about recycling used cooking oil. In general, a large portion of used cooking oil are disposed through household sinks, without being aware of the possibility of used cooking oil to be processed to produce various useful products such as candles, soap, and biofuel. This could reduce environmental pollution, safeguard aquatic life, stabilise water ecosystems, and introduce a new alternative to replace conventional fuels. This programme provides an opportunity to generate extra income by selling used cooking oil for RM2 per kilogram."

This programme has also changed the public's perspective on the role of mosques. In their reflection, Group 2 mentioned: "Mosques are not merely places of worship; rather, they also serve as economic centres. History shows how Prophet Muhammad (PBUH) managed and turned the mosque into a centre for worship, education, social activities, community development, information dissemination and various other functions. Initiatives like this can capture public attention, making mosques centres for community development and spiritual enhancement."

CONCLUSION

Islamic Religious Education goal is not limited to transferring knowledge but also transforming the morale and attitudes of students. Islam has outlined values and guidelines for human beings in every aspect of life, including environmental issues. In this study, it is proposed that among Islamic environmental values are: (i) work for Allah, (ii) *amanah*, (iii) cooperation, (iv) *musyawarah*, (v) *istiqamah*, (vi) *itqan*, (vii) *ihsan*, (viii) grateful and (ix) welfare. These values have been instilled during the teaching and learning process of the Revealed Knowledge and Natural Phenomena course in the Academy of Islamic Studies, Universiti Malaya for undergraduate students. This study has applied an experiential learning approach apart from lectures in class. The students have been jointly involved in a volunteer programme that aims to create environmental sustainability awareness in the surrounding community at two selected mosques in Kuala Lumpur.

The findings of the study revealed that experiential learning had a positive impact on the student's attitudes and facilitated pro-environmental behaviour practices. The students reported several values through the reflective writing regarding the program, namely; (i) work for Allah, (ii) *amanah*, (iii) cooperation, (iv) *ihsan*, (v) grateful and (vi) welfare. Analysis of the reflection essays written by students revealed that participation in the program facilitated experiential learning, providing them with practical knowledge that could enhance their ability to engage in pro-environmental actions in the future. Hence, this study confirms previous findings (Austin et al., 2015; Liu et al., 2020; Maurer et al., 2020) that experiential learning serves as the best approach to instil values and promote pro-environmental behaviours among students. This is due to its holistic approach, which involves cognitive, affective, and psychomotor domains of learning. The set of skills in the affective domain is crucial in transformative learning as its' highest goal is developing and transforming students to live by a code of desired behaviour. It is believed that collaborative efforts involving stakeholders at the state level can provide valuable insights for developing effective strategies to enhance awareness and encourage participation among the Muslim community in Green Mosque initiatives. These initiatives aim to promote environmentally friendly behaviours in daily lifestyles. By engaging students from the Academy of Islamic Studies as advocates for green solutions to sustainability challenges faced by the broader Muslim community, we are optimistic about the potential role of mosques in mobilising fellow Muslims at the grassroots level. This involves translating Quran and Sunnah

teachings on sustainability practices into cultural contexts, which is essential for fostering societal change towards a more sustainable future.

The pedagogical implications of incorporating experiential learning, facilitated by reflective essay writing on Islamic values concerning students' involvement in community engagement programs, specifically within the context of the Eco-Bazaar Masjid, wield considerable influence in shaping students' attitudes towards embracing positive environmental values grounded in Islamic teachings. With this approach, students can grasp the course content of Revealed Knowledge and Natural Phenomena in an empirical manner efficiently and constructively. Reflective essay writing allows students to evaluate their contributions to the Eco-Bazaar Masjid and assess the impact of their actions on the community and environment. This process fosters a sense of accountability and empowers students to become active participants in community engagement initiatives, promoting social cohesion and collective action. Reflective essay writing also fosters a culture of lifelong learning by encouraging students to continuously reflect on their experiences, refine their values and adapt their behaviours accordingly. This iterative process promotes personal growth, self-awareness, and continuous improvement, preparing students to be ethical leaders and change agents in their communities. In summary, integrating reflective essay writing on Islamic values related to community engagement programme, such as the Eco-Bazaar@Masjid, enhances students' ethical reasoning, community engagement skills, cultural sensitivity, and commitment to lifelong learning. By fostering critical reflection and introspection, educators can empower students to become ethical leaders and active contributors to a sustainable and inclusive society.

However, there are several limitations to this research. Firstly, due to time constraints, the data for this study was collected only from Applied Science with Islamic Studies students who enrolled in Revealed Knowledge and Natural Phenomena coursework during Semester 2, 2021/2022. Secondly, the reflective essays indicating positive environmental attitudes from the 46 students were completed as group assignments rather than individually. Therefore, it is recommended that future studies investigating the impact of experiential learning in cultivating values and positive attitudes in students should be conducted over a longer duration and with a broader sample of students to enhance data comprehensiveness. In the realm of environmental studies, it is crucial to examine how experiential learning might further influence student behaviour, as this study solely focuses on the impact of instilled Islamic values on student attitudes. Lastly, further research is necessary to explore students' participation in community engagement programs, whether formal or informal, which could foster affective learning domains crucial for self-transformation among IRE students.

In conclusion, the application of experiential learning must be extended to other Islamic Religious Education courses accordingly, and the approach in the Revealed Knowledge and Natural Phenomena course described in this paper may shed some light on its implementation. Some suggestions for future studies on instilling Islamic values of environmental sustainability through experiential learning are as follows:

1. Researchers could conduct a longitudinal study to track the long-term effects of experiential learning on students' attitudes and behaviours toward environmental sustainability. This study would involve ongoing follow-ups with participants to assess sustained changes in their environmental behaviours shaped by Islamic values.
2. Foster interdisciplinary collaborations between Islamic studies, environmental science, education, and philosophy departments to enrich the research on instilling Islamic values of environmental sustainability through experiential learning. Incorporate diverse perspectives and methodologies to address complex issues related to environmental stewardship within an Islamic framework.
3. In future research, Cross-Cultural Research could also be utilised to investigate the variances in the integration of Islamic values of environmental sustainability through experiential learning across diverse cultural and geographical contexts. This study would delve into how cultural factors shape students' understanding and implementation of these values in environmental stewardship activities.

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