

Research Article

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Conceptual Awareness of the Sustainable Development Goals (SDGs) Among Islamic Education Teachers: Bridging Faith and Sustainability

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Abstract

Background/purpose. The integration of the Sustainable Development Goals (SDGs) into education positions schools as central actors in promoting global sustainability. Islamic Education, rooted in values of stewardship, justice, and moderation, inherently aligns with Education for Sustainable Development (ESD). Yet, empirical evidence from Arab contexts on teachers' awareness of sustainability remains limited. This study examined Islamic Education teachers' awareness of SDG-related concepts in public schools in Irbid Governorate, Jordan, and explored differences according to gender, academic qualification, and years of experience.

Materials/methods. Data from 242 teachers (2023/2024) were collected using a validated questionnaire across three sustainability domains and analyzed through descriptive statistics and a three-way ANOVA.

Results. Results indicated high teacher awareness, highest in the social domain and lowest in the environmental domain, with no significant differences by gender, qualification, or experience. The findings support integrating sustainability into Islamic Education through targeted environmental training and culturally aligned ESD/SDG-based curriculum development.

Conclusion. Sustainable development concepts, particularly in the social domain, reflecting strong alignment with Islamic values. The consistent awareness across gender, qualification, and experience underscores the role of Islamic Education in advancing sustainability in schools. The study recommends developing targeted professional training—especially on the environmental dimension—and integrating sustainability concepts more systematically into Islamic Education curricula. Future research should examine how such integration influences teaching practices and student learning outcomes.

1. Introduction

The 21st century is characterized by rapid scientific developments, cultural openness, globalization, and growing energy resources. These factors have significantly changed individuals' perspectives on their lives and societies. Therefore, improving learning has become one of the most important objectives for modern societies.

A good educational system, as highlighted by Al-Fraihat (2018), enhances educational opportunities, strengthens societies' resilience, and increases economic growth. It also provides individuals with the skills needed to succeed in a new sustainable economy. Peeters (2021) argues that quality education contributes to the preservation of human capital by equipping individuals with the skills and knowledge they need, which in turn helps them become culturally and intellectually enriched, productive, and committed members of their communities.

Global educational experiences indicate that successful development and reform depend on clear, effective policies. The education system stands out because its main output is preparing individuals with knowledge and skills, linking education to practical work to achieve sustainable development in the modern information age. This necessitates that schools operate within an effective philosophical framework aligned with the global educational system (Yang & Xiu, 2023). Therefore, quality education is closely linked to sustainable development, and the overall goals of sustainable development cannot be achieved without focusing on education and its improvement. This was emphasized by Al-Zaydat (2022), who stated that quality education is integral to sustainable development, leading to its inclusion in the United Nations General Assembly's 2030 Agenda for Sustainable Development, which includes 17 goals, one of which is quality education. Sustainable development cannot be achieved without quality education.

Sachs, Kroll, Lafortune, Fuller, and Woelm (2022) argue that education, in light of the Sustainable Development Goals (SDGs), serves as a strong logical foundation for teaching in the 21st century. It primarily relies on inquiry-based processes, integrating teaching skills with content, core competencies, and the cognitive habits that students must possess to effectively participate in achieving a sustainable future. Education for sustainable development is defined as a transformative learning process that equips both students and teachers with the thinking and teaching methods needed by society to achieve economic growth and prosperity.

Khalid Malik, Iqbal, Zamir, and Fatima Malik (2023) emphasize that education is one of the most important pillars of sustainable development and the foundation upon which it is centered. The world cannot achieve its goals and objectives if educational levels remain low. As a result, the UNESCO Earth Charter emphasizes education for sustainable development, stating that sustainable development cannot be achieved without quality education.

The Islamic perspective on sustainable development mandates that development occur within religious and ethical frameworks to prevent excesses that could threaten sustainability. According to Al-Baridi (2017), the Islamic view encompasses material, spiritual, and moral aspects. Thus, sustainable development in Islam is not limited to worldly activities but also extends to preparing for the afterlife and ensuring harmony between both lives (Suprianto et al., 2023).

Thus, the task of sustainable development from an Islamic perspective is to meet human needs, both current and future, whether material or spiritual, including the right of individuals to have a share in sustainable development in other systems and ideas, as it is based on the principle of balance and moderation in meeting human needs in a way that aligns with the nature of creation (Abu Al-Nasr & Mohammed, 2017). The Islamic vision of sustainable development links humans, especially Muslims, to their mission in life, a great mission based on developing the earth, spreading goodness, and achieving divine stewardship. This means that, from an Islamic perspective, sustainable

development seeks to instill higher values in the human soul and elevate it toward greater purposes (Jumaa, 2017).

To ensure the effectiveness of sustainable development in the educational process, it has been incorporated as educational and instructional goals. These goals focus on educating students at different stages of education to care for and preserve the environment; enabling them to acquire economic skills that help them lead a dignified life and contribute to community building; and also fostering students who coexist harmoniously with others, promoting social solidarity and the rights of others (Al-Siyabi et al., 2017).

While sustainable development, Islamic education, and “teacher awareness are each defined, their interconnection is critical for effective educational reform. Previous research highlights that Islamic education curricula can foster sustainability by embedding stewardship and ethical responsibility (Osman, 2017; Saniotis, 2012). However, the present study argues that achieving these outcomes depends largely on teachers' awareness and their ability to translate curricular principles into everyday teaching practice—a connection not fully addressed in prior studies.

Islamic education teachers contribute to the success of educational and learning objectives in general, and sustainable education in particular. They are considered leaders of the educational process and active contributors to its success and development. Their sincere desire to work equips them with the readiness needed to develop their abilities and maintain practical enthusiasm.

The purpose of this study is to assess the level of awareness among Islamic education teachers in Irbid Governorate regarding sustainable development concepts (social, economic, and environmental) and to examine whether significant differences exist by gender, academic qualifications, and years of experience. This research contributes to the literature by providing comparative insights across teacher variables in the Arab context and by offering practical recommendations for curriculum development.

2. Literature Review

A number of studies have addressed sustainability within Islamic education from diverse perspectives. Albar et al. (2024) proposed an Islamic education curriculum based on environmental principles, highlighting the role of religious schools in promoting environmental ethics through practical initiatives such as organic farming and reforestation. Their findings support integrating Islamic values into environmental education to enhance community sustainability and advocate for multi-stakeholder collaboration in curricular implementation.

In Jordan, Al-Shura (2023) explored teachers' perceptions of the SDGs in private schools, revealing a strong commitment to quality education but also identifying systemic barriers, such as outdated teaching methods and disconnected curricula. The study found no significant differences based on gender, qualification, or region.

Asdlori and Yahya (2023) examined the role of Islamic teacher-training faculties in Indonesia in promoting the SDGs through teaching, research, and outreach. Their qualitative findings highlighted Islamic education's transformative potential to advance environmental justice and social equity, calling for inclusive curriculum development and institutional partnerships.

Al-Qarni and Al-Habeeb (2021) conducted a survey of secondary Islamic education teachers in Saudi Arabia and found a high level of knowledge of sustainable development concepts. Similarly, Al-Dhafiri and Al-Harbi (2021) reported strong awareness among female teachers in Kuwait, suggesting that gender may play a role in shaping perceptions of sustainable development. This finding aligns with the current study's investigation into gender as a key variable and underscores the need for comparative analysis across contexts.

Al-Maqbali (2021) explored Islamic foundations of sustainability using Quranic and prophetic sources. He argued that Islamic teachings surpass modern secular definitions in comprehensiveness and ethical responsibility. His study proposed a matrix for integrating sustainable values into Islamic education.

Lastly, Mohammad (2019) surveyed Islamic education teachers in West Java and concluded that integrating environmental sustainability into curricula was both essential and feasible. The findings emphasized the importance of cultivating relevant competencies to align religious education with sustainable development goals.

2.1. Study Problem and Questions

Sustainable development is no longer a luxury but a necessity to achieve justice and equity in distributing the fruits of development and wealth among different and successive generations. Achieving sustainable development requires attention not only to economic growth but also to other social issues. The full transformation of society and the management of the environment, in addition to economic growth, must be addressed; otherwise, growth itself will face risks (Al-Dhufairi & Al-Harbi, 2021).

Through reviewing previous studies and research, it has become clear that there are few studies that link sustainable development in its broad concept with Islamic education. There is also a scarcity of studies aimed at verifying the application of the education-for-sustainable-development approach in education in general, and specifically in Islamic education. Moreover, there are few studies in the Arab context, especially in Jordan, to explore teachers' awareness of the education-for-sustainable-development approach. In response to recommendations from previous studies, such as the study by Al-Qarni & Al-Habib (2022), which recommended the necessity of providing Islamic education teachers with concepts related to sustainable development, enhancing their skills and fundamental concepts, and integrating sustainable development into Islamic education curricula, this study aims to investigate this issue.

Through the researchers' observations in the educational field, some Islamic education teachers lack sufficient awareness of education for sustainable development, despite employing it in various contexts. The subject of Islamic education intersects with the goals of sustainable development in its multiple fields. Additionally, the researchers observed the weakness of Islamic education teachers in preparing a learning environment based on education for sustainable development, and the variation in their teaching skills in this regard. This motivated the researchers to adopt the study topic and seek to apply it in Irbid Governorate.

Furthermore, the researchers conducted a pilot study with 10 Islamic education teachers in Irbid Governorate, who were asked open-ended questions about their knowledge and awareness of sustainable development concepts. The results showed that the vast majority of teachers agreed on their lack of knowledge of sustainable development concepts. Additionally, the respondents agreed that there is a lack of inclusion of sustainable development dimensions or related issues in Islamic education textbooks, particularly in the main areas of social, economic, and environmental sustainability. This led to the current study to confirm the degree of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts from their perspective, by answering the following two questions.

First Question: What is the level of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts from their perspective?

Second Question: Are there statistically significant differences at the significance level ($\alpha=0.05$) between the mean responses of the study sample members regarding the level of awareness of

Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts due to variables (gender, academic qualification, and years of experience)?

2.2. Study Objectives

This study aims to achieve the following objectives:

- Assess the level of awareness among Islamic Education teachers in public schools in Irbid Governorate regarding sustainable development concepts across its key dimensions (social, economic, environmental).
- Determine whether significant differences exist in teachers' awareness levels based on gender, academic qualification, and years of teaching experience, in order to inform targeted educational interventions.

2.3. Significance of the Study

Theoretical Significance: This study contributes to the theoretical literature by clarifying the definitions, dimensions, and educational relevance of sustainable development. It enhances understanding of ESD within Islamic Education and encourages further research on sustainable thinking skills in relation to various educational variables.

Practical Significance: Findings can guide teachers, policymakers, and training institutions in designing targeted professional development programs. The study supports integrating sustainable thinking skills into teacher training and curriculum design, particularly in Islamic Education, through evidence-based workshops and educational strategies.

2.4. Study Terminology

This study includes the following key terms and their operational definitions:

Sustainable Development (Terminological Definition): Sustainable development is defined as "development based on the principle of optimal investment of available resources to improve the living standards of future generations alongside the present generation, ensuring continuity" (Al-Kubaisi, 2019, p. 56). **Sustainable Development Operationally Defined as:** The understanding and awareness of the importance of integrating sustainable thinking skills into the educational process in its three domains (social, economic, and environmental), and knowing how to apply them to achieve sustainable development goals. It is measured quantitatively by the score achieved by Islamic education teachers on the scale prepared for this purpose.

Islamic Education Teachers (Operational Definition): Male and female educators assigned by the Jordanian Ministry of Education to teach Islamic education subjects to students in Jordanian public schools during the 2024/2025 academic year.

2.5. Study Limitations and Delimitations

The current study is limited by the following:

The study focused on Islamic Education teachers in public schools within Irbid Governorate during the first semester of the 2024 academic year. Its findings are limited by the study tool's validity and reliability, as well as by the respondents' level of engagement and accuracy in completing the questionnaire.

3. Methodology and Procedures

This section describes the study methodology, population and sample, the study tool, the procedures followed to verify its validity and reliability, and the application procedures. Additionally, it outlines the implementation steps and the data processing and analysis methods used in the study.

3.1. Study Methodology

The descriptive survey method was adopted due to its suitability for the purposes of the current study.

3.2. Study Population

The study population consisted of all Islamic education teachers working in schools in Irbid Governorate, totaling 418 teachers, according to the Ministry of Education's statistics for the 2025 academic year.

3.3. Study Sample

A simple random sample of 242 Islamic Education teachers was selected from a total population of 418 in Irbid Governorate. The sample size, determined using Sekaran tables and the Krejcie & Morgan formula, exceeds the minimum recommended for a 95% confidence level and 5% margin of error, thus ensuring the reliability and representativeness of the study. Figure 1 shows this.

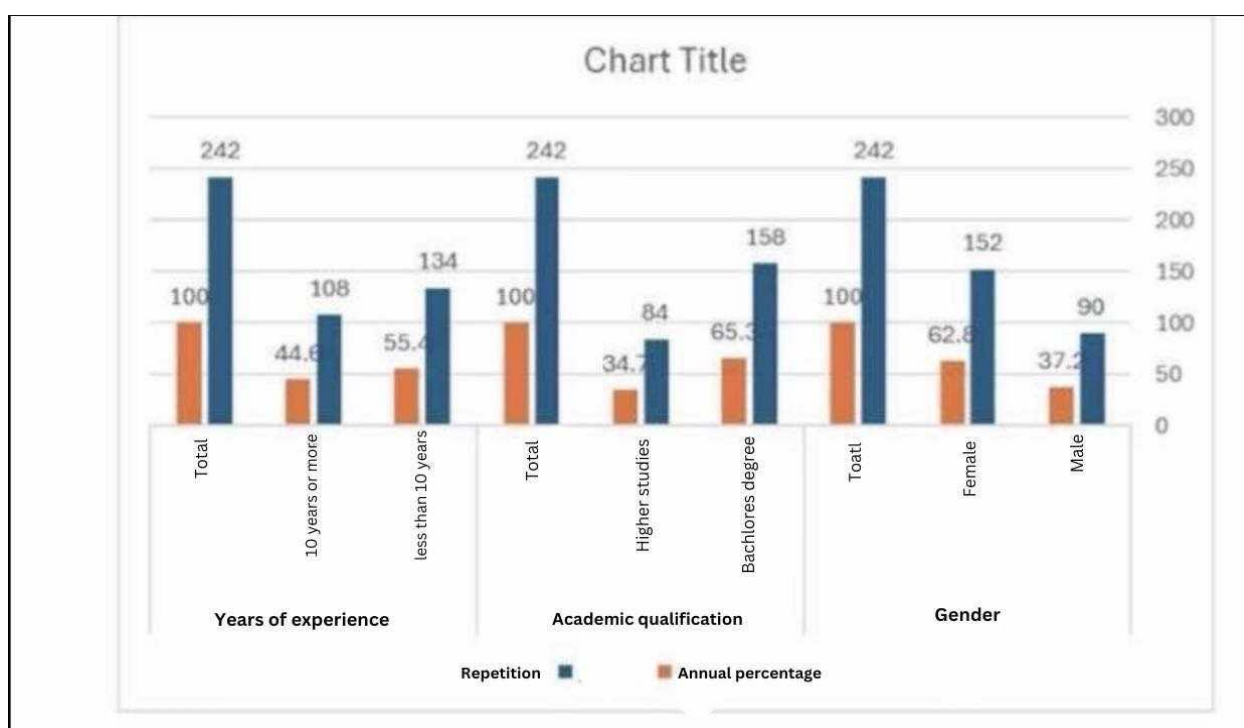


Figure 1. Distribution of Study Sample Participants According to the Variables

3.4. Study Tool

To meet the study objectives, a questionnaire was developed based on relevant literature (e.g., Al-Qarni & Al-Habeeb, 2021; Al-Zufairi & Al-Harbi, 2021). It comprised two sections: demographic data and 24 items assessing awareness of sustainable development concepts across three domains : social, economic, and environmental (8 items each).

3.5. Validity of the Tool

To ensure content validity, the initial questionnaire was reviewed by 10 experts, leading to item revisions and the removal of three items, resulting in a final version of 21 items. A five-point Likert scale was used.

Construct validity was assessed using Pearson correlation coefficients from a pilot sample of 30 teachers, confirming acceptable item-domain correlations, as shown in Table 1.

Table 1. Pearson Correlation Coefficients for the Items' Relation to Their Domain and the Overall Axis (N=30)

Awareness of Islamic Education Teachers of Sustainable Development Concepts											
Field	Item No.	Item Correlation with Field	Item Correlation with Axis	Field	Item No.	Item Correlation with Field	Item Correlation with Axis	Field	Item No.	Item Correlation with Field	Item Correlation with Axis
Social	1	0.76	0.60	Economic	8	0.74	0.68	Environmental	15	0.81	0.75
	2	0.70	0.59		9	0.78	0.75		16	0.88	0.87
	3	0.89	0.80		10	0.80	0.79		17	0.76	0.69
	4	0.78	0.82		11	0.66	0.69		18	0.81	0.77
	5	0.79	0.71		12	0.82	0.75		19	0.84	0.76
	6	0.75	0.58		13	0.87	0.78		20	0.89	0.86
	7	0.67	0.59		14	0.79	0.74		21	0.80	0.75

As shown in Table 1, Pearson correlation coefficients between items and their respective domains ranged from 0.66 to 0.89, and those for the overall axis ranged from 0.58 to 0.87, values considered statistically acceptable (Al-Kilani & Al-Sharifin, 2011). Accordingly, no items were removed based on construct validity.

Furthermore, inter-domain correlations and their correlations with the total scale were calculated, confirming strong internal consistency, as shown in Table 2.

Table 2. Pearson Correlation Coefficients for the Domains, and Pearson Correlation Coefficients between the Domains Within Each Axis

Level of awareness of Islamic education teachers in public schools in Irbid governorate regarding sustainable development concepts from their perspective				
Relationship	Statistical	Social	Economic	Environmental
Social	Correlation Coefficient	0.77**		
	Statistical Significance	0.00		
Environmental	Correlation Coefficient	0.71**	0.87**	
	Statistical Significance	0.00	0.00	
Overall	Correlation Coefficient	0.88**	0.95**	0.94**
	Statistical Significance	0.00	0.00	0.00

**All values are statistically significant at the (0.01) level

Table 2 shows strong correlations between each domain and the overall scale ($r = 0.88$ – 0.95), as well as appropriate inter-domain correlations ($r = 0.71$ – 0.87), confirming the instrument's internal consistency.

3.6. Reliability of the Tool

Internal consistency was verified using Cronbach's alpha, and test-retest reliability was assessed by re-administering the tool and its domains after two weeks. Table 3 presents the internal consistency and stability reliability coefficients for the tool.

Table 3. Cronbach's Alpha and Stability Reliability Coefficients for the tool and its domains

The level of awareness of Islamic Education teachers in the Qasaba Irbid Governorate regarding sustainable development concepts			
Domain	Cronbach's Alpha	Test-Retest Reliability	Number of Items
Social	0.87	0.94**	7
Economic	0.89	0.90**	7
Environmental	0.92	0.89**	7
Overall	-	0.95**	21

**All values are statistically significant at the (0.01) level

Table 3 shows that Cronbach's alpha ranged from 0.87 to 0.92, and test-retest reliability from 0.89 to 0.94, with an overall coefficient of 0.95 indicating strong reliability suitable for the main sample application (Al-Kilani & Al-Sharifeen, 2011).

3.7. Study Tool Scoring Criterion

A five-point relative scaling model was used to interpret the tool's mean scores, domains, and items. The scale range (1–5) was divided into equal intervals of 0.8 to classify the levels, as illustrated in Figure 2.

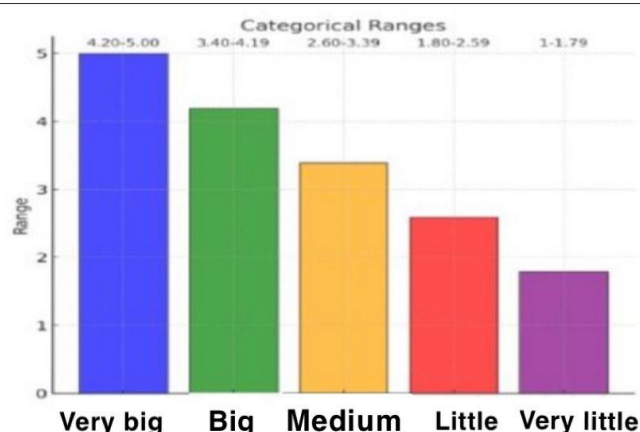


Figure 2. Statistical Correction to Determine the Level of Mean Scores

4. Results and Discussion

The study examined Islamic Education teachers' awareness of sustainable development concepts in Irbid public schools by addressing the following research questions:

First: Results of the first question, which stated: "What is the level of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts from their perspective?" To answer this question, the mean scores and standard deviations of the level of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts from their perspective were calculated. Table 4 shows this.

Table 4. Mean Scores and Standard Deviations of Islamic Education Teachers' Awareness of Sustainable Development Concepts in Irbid Public Schools (by Domains)

Rank	Domain Number	Axis and Domains	Mean Score	Standard Deviation	Level
1	1	Social	4.07	0.93	High
2	2	Economic	3.97	0.77	High
3	3	Environmental	3.86	0.75	High
Overall			3.97	0.44	High

From the results in Table 4, it is evident that the mean scores for the domains of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts ranged from 3.86 to 4.07. The domains were ranked as follows: the "Social" domain ranked first with a mean score of 4.07 and a standard deviation of 0.93, at a high level; followed by the "Economic" domain in second place, with a mean score of 3.97 and a standard deviation of 0.77, at a high level; and finally, the "Environmental" domain ranked third, with a mean score of (3.86) and a standard deviation of 0.75, at a high level. The overall mean score for the level of awareness of Islamic education teachers in public schools in Irbid Governorate regarding sustainable development concepts was 3.97, with a standard deviation of 0.44, indicating a high level of awareness. This may be attributed to Islam's emphasis on sustainable development across economic, social, and environmental domains. This, in turn, has enabled Islamic education teachers to integrate the principles of sustainable development into their teaching. Another possible reason is that the Islamic education curriculum includes numerous topics addressing sustainable development concepts. Some of these topics aim to enhance understanding, awareness, and general societal perception of issues related to change and development, increase awareness of the relationship between populations and natural resources, and promote the effective use and conservation of resources to achieve sustainability.

Additionally, this could be attributed to the balanced preparation of Islamic education teachers in universities, where they are equipped with values and principles related to sustainable development derived from the Holy Quran and the Noble Sunnah. Furthermore, the Ministry of Education has conducted training courses for Islamic education teachers (both male and female) to instill values and concepts based on sustainable development and to integrate them into the educational process. Another contributing factor is the cognitive and educational competencies that Islamic education teachers must possess to teach the subject effectively. These competencies include teaching skills such as planning, implementation, and evaluation to clarify the concept of sustainable development, as well as the ability to organize activities and experiences within appropriate strategies that align with the goals and concepts of sustainable development. The findings of Mohammad's (2019) study indicated that integrating sustainable development education into the Islamic education curriculum, particularly in relation to environmental conservation, is highly important and feasible. The results of the current study align with those of Al-Qarni and Al-Habib (2021), who found that secondary school Islamic education teachers' knowledge of sustainable development concepts was high. Similarly, the findings are consistent with those of Al-Dhafiri and Al-Harbi's (2021) study, which demonstrated that secondary school teachers in Kuwait had a high level of awareness regarding the characteristics of sustainable development.

The means and standard deviations were also calculated for the estimates of the study sample members for each individual item of each domain, as follows:

A. Social Domain

Mean scores and standard deviations for teachers' responses on the Social domain items were calculated and ranked in descending order, as shown in Table 5.

Table 5. The Means and Standard Deviations for the Items of the "Social" Domain Arranged in Descending Order.

Rank	Item Number	Item Description	Mean	Standard Deviation	Level
1	3	I encourage students to advise others, promote good, and forbid evil	4.16	1.06	High
2	4	I warn students about negative social practices such as theft, murder, and injustice	4.11	1.16	High
3	6	I encourage students to practice consultation and dialogue among themselves	4.08	1.23	High
4	5	I encourage students to be honest and sincere in their dealings	4.07	1.09	High
5	2	I develop in students the ability to make use of time and warn against wasting it in light of what is religiously mandated	4.05	1.19	High
6	1	I urge students to foster love and brotherhood among themselves.	4.01	1.20	High
7	7	I encourage students to respect others and preserve their rights	3.98	1.25	High
Total			4.07	0.93	High

It is clear from Table 5 that the mean scores of the sample members' estimates of the level of awareness of Islamic education teachers in Irbid Governorate regarding the concepts of sustainable development in the social field ranged from 3.98 to 4.16, indicating a high level of awareness. This can be attributed to the fact that Islamic education teachers strive to instill social values in students by teaching them the principles of enjoining what is right and forbidding what is wrong and encouraging them to be active, influential individuals in their community. They also aim to promote the principles of social solidarity among themselves. This could result from the positive image that Islamic education teachers project in their interactions with others, serving as role models for such practices. Additionally, this can be attributed to Islam's comprehensive framework for organizing and developing the lives of individuals and communities, ensuring sustainability for current and future generations. Islam focuses on the individual, the family, and the community, emphasizing the importance of educating, developing, and refining the individual to become a balanced, productive person who enjoys good relationships, maintains a positive mindset, and loves others as he loves himself. Islam also pays attention to the family, which is the foundation of society, ensuring justice, equality, and solidarity, and combating poverty.

Item 3, which states, "I encourage students to advise others, promote good, and forbid evil," ranked first with an arithmetic mean of 4.16, a standard deviation of 1.06, and a high level. This can be attributed to the fact that Islamic education teachers (both male and female) utilize wise

Quranic verses and noble Hadiths that support these principles and present them to students. Additionally, they engage in purposeful educational activities to instill these principles in students, thereby contributing to the achievement of sustainable development goals. On the other hand, Item 7, which states, "I encourage students to respect others and preserve their rights," ranked last with a mean of 3.98, a standard deviation of 1.25, and a high level. This can be attributed to the fact that Islamic education teachers (both male and female) instill sustainable Islamic values in students that remain with them throughout their educational stages. Among the most important of these values are respecting others and preserving their rights. This, in turn, motivates teachers to organize school activities that contribute to the preservation of school property, forgiveness when possible, and the effective use of dialogue.

B. Economic Domain

Mean scores and standard deviations for the Economic domain were computed and ranked in descending order, as shown in Table 6.

Table 6. Mean Scores and Standard Deviations for the Economic Domain Items Ranked in Descending Order

Rank	Item No.	Item Description	Mean	Standard Deviation	Level
1	8	Encourage students to preserve divine blessings and avoid extravagance and waste.	4.09	1.06	High
2	10	Encourage students to work and earn a livelihood.	4.01	1.07	High
3	9	Encourage students to rationalize consumption.	4.00	1.04	High
4	13	Encourage students to be kind to the poor and needy.	3.96	1.20	High
5	11	Encourage students to work and avoid the culture of shame regarding work.	3.94	1.16	High
6	14	Cultivate the concept of volunteer work among students.	3.90	1.29	High
7	12	Foster a love of knowledge and its pursuit among students.	3.88	1.20	High
Total Economic Domain			3.97	0.77	High

It is evident from Table 6 that the mean scores for Islamic education teachers' awareness of sustainable development concepts in the economic domain ranged from 3.88 to 4.09, indicating a high level of awareness. This can be attributed to the fact that Islamic education teachers (both male and female) recognize the divine blessings bestowed by Allah upon societies and strive to instill these values in students, such as avoiding extravagance and waste, rationalizing consumption, and providing assistance to those in need. Item (8), which states, "I encourage students to preserve divine blessings and avoid extravagance and waste," ranked first with an arithmetic mean of 4.09, a standard deviation of 1.06, and a high level of agreement. This can be attributed to the efforts of Islamic education teachers in raising students' awareness of the importance of managing natural resources responsibly and preserving them for future generations, as well as avoiding extravagance and waste, in line with sustainable development principles. Meanwhile, item (12), which states "I reinforce

students' love for knowledge and the pursuit of it," ranked last with a mean score of 3.88, a standard deviation of 1.20, and a high level. This may be attributed to Islamic education teachers instilling in students the values of seeking and preserving knowledge, even at advanced stages of life. This is because knowledge is a key pillar in the success, advancement, and development of nations across all economic, social, and environmental fields. Moreover, Islam strongly encourages the pursuit of knowledge, highlighting its importance for personal and collective growth.

C. Environmental Field

Mean scores and standard deviations for the Environmental domain were calculated and ranked in descending order, as presented in Table 7.

Table 7. Mean Scores and Standard Deviations for the Environmental Field Items Ordered in Descending Order

Rank	Item Number	Item Description	Mean Score	Standard Deviation	Level
1	19	I encourage students to maintain general cleanliness	3.91	1.12	High
2	17	I encourage students to beautify and decorate the school environment	3.90	1.08	High
3	15	I urge students to plant trees and shrubs in the school garden	3.88	1.15	High
4	18	I spread awareness on maintaining and conserving water resources	3.85	1.08	High
5	21	I warn students about the dangers of water and air pollution	3.83	1.26	High
6	20	I encourage students to be kind to animals	3.82	1.09	High
7	16	I warn students against negative behaviors toward the environment	3.80	1.22	High
Overall			3.86	0.75	High

The results in Table 7 show that the mean scores for the sample's estimates of the awareness level of Islamic education teachers in Irbid Governorate regarding sustainable development concepts in the evaluation domain ranged from 3.80 to 3.91, indicating a high level of awareness. This can be attributed to the efforts of Islamic education teachers in organizing educational activities that contribute to the preservation of the school and community environment, as well as instilling sustainable environmental values in students that they can practice in their lives both inside and outside the school. Item 19, which states 'I encourage students to maintain public cleanliness,' ranked first, with a mean score of 3.91, a standard deviation of 1.12, and a high level. On the other hand, Item 16, which states, "I warn students against negative behaviors toward the environment," ranked last with a mean of 3.80, a standard deviation of 1.22, and a high level of agreement. This is attributed to the fact that Islamic education teachers recognize the importance of the environment and the need to preserve it for future generations, while providing the essential resources for life. This, in turn, motivates them to instill in students the importance of environmental preservation.

Second: Results of the second question, which stated: 'Are there statistically significant differences at the significance level ($\alpha = 0.05$) between the mean scores of the study sample's responses regarding the awareness of Islamic education teachers in Irbid Governorate of sustainable development concepts attributed to the variables (gender, educational qualification, and years of service)?' Mean scores and standard deviations were calculated by gender, qualification, and years of service, as shown in Table 8.

Table 8. The Mean Scores and Standard Deviations of Islamic Education Teachers' Awareness of Sustainable Development Concepts and its Domains According to Study Variables

Variable	Levels/Categories	Statistic	Social	Economic	Environmental	Total for Domain
Gender	Male	Mean	4.02	4.01	4.01	4.01
		Standard Deviation	0.93	0.74	0.68	0.43
	Female	Mean	4.04	4.06	4.08	4.06
		Standard Deviation	0.91	0.77	0.78	0.45
Academic Qualification	Bachelor's	Mean	3.98	4.01	3.98	3.99
		Standard Deviation	0.92	0.75	0.75	0.41
	Postgraduate	Mean	3.96	3.92	3.93	3.94
		Standard Deviation	0.95	0.81	0.75	0.49
Years of Service	Less than 10 years	Mean	3.95	3.93	3.88	3.92
		Standard Deviation	0.95	0.80	0.81	0.47
	10 years or more	Mean	3.94	3.90	3.89	3.91
		Standard Deviation	0.87	0.73	0.66	0.38

As shown in Table 8, apparent differences in the mean scores were observed across the study variables (gender, academic qualification, and years of service). To determine their statistical significance, a three-way ANOVA was conducted, with results presented in Table 9.

Table 9. Three-Way ANOVA Results for Islamic Education Teachers' Awareness of Sustainable Development Concepts in Irbid Governorate

Source of Variance	Sum of Squares	Degrees of Freedom	Mean Squares	F-Value	Statistical Significance	η^2
Gender	0.17	1	0.17	0.55	0.35	0.00
Academic Qualification	0.06	1	0.06	0.19	0.58	0.00
Years of Experience	0.61	1	0.61	1.97	0.08	0.01
Error	73.53	239	0.31			
Total	74.37	242				

Table 9 shows no statistically significant differences ($\alpha = 0.05$) in teachers' awareness levels across gender, academic qualifications, or years of experience. This may be attributed to shared training, similar teaching environments, and professional competencies across all groups. Teachers at all qualification levels appeared equally prepared to integrate sustainable development concepts, supported by their educational background and the religious foundations of Islamic Education. These findings are consistent with Al-Shoura (2023), who also reported no significant differences by gender or qualification in relation to SDGs.

5. Conclusion

This study concluded that Islamic Education teachers in Irbid exhibit a high level of awareness of sustainable development concepts, especially in the social domain, highlighting a strong alignment with core Islamic values. The consistency of awareness across gender, qualification, and experience reinforces the potential of Islamic Education as a key driver of sustainability in schools.

6. Recommendations

Based on these findings, it is recommended to design targeted professional development programs, particularly focusing on the environmental dimension, and to systematically integrate sustainability concepts into Islamic Education curricula in alignment with the Sustainable Development Goals (SDGs). Furthermore, future research should explore the practical impact of such integration on teaching strategies and student learning outcomes, ensuring that sustainability is meaningfully embedded within culturally and ethically grounded educational frameworks.

Declarations

Author Contributions. Almousa, N. A.: conceptualization, literature review, methodology design, manuscript writing. Fayyumi, K. A., & Alshorman.: support in data analysis, review and editing. All authors have read and approved the final version of the article.

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