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**The availability of sustainable education skills for primary
school teachers in the State of Kuwait
"a proposed conception"**

By

Prof. Hussein Mejbel Al-Hadba Alrashidi

Professor of Fundamentals of Education, College of Basic
Education, Public Authority for Applied
Education and Training, State of Kuwait

Dr. Abdullah Khaled Mansoor

Assistant Professor of Fundamentals of Education, College of Basic
Education, Public Authority for Applied
Education and Training, State of Kuwait

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Study Introduction:

Sustainable development is one of the central topics at the present time, which has increased interest in it globally, as a result of its exacerbation (Marwa Al-Nabhaniya, 2018, p. 11).

The concept of sustainable development was first formally mentioned in a report issued by the World Commission on Development and Environment in 1987 entitled "Our Common Future", which focused on studying the impact of the industrialization and economic policies of the countries of the world on natural resources, and then stated at the Rio de Janeiro Conference, held in 1992, that human beings are the essence of sustainable development, and that they have the right to live healthy and productive lives in harmony with nature, and the Rio Declaration, in which 178 countries participated, is the official pillar of the concept of Sustainable development, where he stressed that the quality of the environment and the safety of... Sustainable development is a comprehensive development that aims to improve the quality of life for contemporary generations in the economic, social, environmental and technological fields, in a way that guarantees the rights of future generations to meet their needs (Ramadan Tantawi, 2021, p. 6).

The SDGs are a specific set of development goals that were released in 2015 through a report issued by UNESCO that included 17 goals and is officially known as "transforming our world" (United Nations, 2015).

The SDGs provide a framework for transforming education at the global level; it is geared towards achieving the three interrelated dimensions of sustainable development: economic, social and environmental (Amin & Greenwood, 2018, p. 119). Among the most prominent sustainable development goals are: eradicating poverty, ending hunger, achieving gender equality, ensuring access to water



and sanitation, taking urgent action to address climate change and its impacts, and protecting ecosystems (UNESCO, 2015).

The fourth of the seventeen SDGs focuses on education as a stand-alone goal and a clear priority in many other goals, and includes dedicated sub-goals related to equality, qualified teachers and safe learning environments in the context of this key goal (Bichi, 2017, pp. 107-109). Various international scientific and educational conferences have urgently called on all countries in the world to employ learning as a tool to build a more secure and sustainable future, at a time when resources are dwindling and It also aims to provide learners with the knowledge, skills and values to achieve sustainable development and its desired goals (Nicholas Burnett, 2009, p. 25). Therefore, ESD gives a new image of inclusive education based on the values, principles and practices necessary to effectively address current and future challenges related to the environment, society and sustainable development, such as water, energy, resource management, climate change, mitigation of the effects and risks of disasters, food crises, health risks, and others. Behavioral changes that allow a society that enjoys more sustainable and sustainable development (Khaled Al-Ananzeh, 2014, p. 87). However, the achievement of ESD objectives depends on the availability of a set of requirements that must be taken into account in the educational process.

A teacher with the required level of skills to successfully implement ESD in the classroom and in schools. The teacher – as the cornerstone of the educational process – can be the most prominent influencer in achieving the SDGs with his students, and therefore he must have all the skills of education for sustainable development. There are a set of requirements that teachers must be aware of to successfully implement ESD (Mulà, et al., 2017, p804):

- Understand how new pedagogical methods can be applied to sustainable development issues.



- Linking the pedagogical foundations of education for sustainable development with the specialized content of the curriculum being taught.
- Reframe and reshape what quality learning outcomes may look like from an ESD perspective.
- Reconsider the mechanisms of evaluating student learning in line with the requirements of sustainable development. Understand how sustainability thinking and practices are expressed in different industries and professions. The development of teaching skills for in-service teachers at all teaching levels is one of the priorities of educational research, with the aim of improving their teaching performance to reach distinguished educational outcomes, and educational systems are largely concerned with preparing and qualifying teachers to develop educational work and teaching performance, and due to the changing nature of the teaching profession, sustainable professional development of in-service teachers is a necessity required by the nature of their work to achieve the changing and renewed education goals according to the data and developments of the current era (Hanan Hassan, 2018, p. 234).

In view of the importance of education for sustainable development and its vital role in preparing students for the requirements of sustainable development in the current era, and the need to qualify teachers armed with the most important skills of education for sustainable development, it is necessary to ensure the level of availability of these skills among teachers as a starting point for the professional development efforts of teachers in this field, which is what is focused on in the current study by studying the availability of education skills for sustainable development among a sample of primary school teachers in Al- Ahmadi Governorate .



The problem of the study

The problem of the current study is embodied in two main dimensions, the first of which relates to primary school children and the other is related to primary school teachers. The following is an explanation of both dimensions based on the personal experiences and observations of the researcher as a teacher in the primary stage in Al- Ahmadi Governorate. As well as enhancing the personal observations and experiences of the researcher with other scientific sources to identify the problem of the study

First:

With regard to primary school children, it is noticeable that these children are not exposed to educational experiences that instill elementary concepts related to environmental awareness, responsible environmental behavior and environmental trends, as well as the lack of exposure of children to the concepts of sustainable development and the associated skills and trends. In this regard, we note that primary school students need more experiences that work to consolidate the concepts and behaviors of sustainable development and related experiences that develop their environmental awareness and instill in them environmentally friendly concepts, values, attitudes and behaviors at an early stage, which we see its weakness by reviewing school activities in primary schools inside and outside the classroom and through extracurricular activities as well.

Second:

With regard to primary school teachers, it is noted that the pre- and in-service training that teachers receive in terms of education for sustainable development is poor, as well as the low level of application of ESD practices in the daily teaching of primary teachers. From the researcher's personal experience, traditional methods of teaching at the primary level are the most



common among teachers without an interest in ESD. The researcher's initial observations indicate the poor knowledge of teachers in education for sustainable development and the lack of mastery of its skills.

In addition, through a review of previous studies and research, and as will be seen in the section on previous studies of this plan, the lack of studies that focused on the skills related to education for sustainable development that must be available to teachers, as well as the lack of studies that focus on the availability or mastery of education skills for sustainable development among teachers, and that most of the studies that have been carried out in countries other than Kuwait, which prompts the need for more studies that work To evaluate the availability of education skills for sustainable development among teachers in primary schools in Kuwait, which is addressed in the current study.

Based on the above, the researcher formulates the problem of the current study in the following declarative phrase:

- "The need to study the reality of the availability of education skills for sustainable development among primary school teachers in some schools in Al- Ahmadi Governorate ."

Study Questions:

The current study focuses on a key question:

- "What is the availability of education skills for sustainable development among a sample of primary school teachers in Al-Ahmadi Governorate?"
- What is the availability of education skills for sustainable development for primary school teachers in Ahmadi Governorate as a total degree and as sub-dimensions (planning - implementation - evaluation)?
- Does the level of availability of education skills for sustainable development of primary school teachers in Ahmadi Governorate



differ significantly according to variables: gender - number of years of experience - specialization - type of school - educational qualification?

Objectives of the study:

- Identify the education skills for sustainable development that must be available to primary school teachers in Al- Ahmadi Governorate.
- Disclosure of the availability of education skills for sustainable development primary school teachers in Al-Ahmadi Governorate as a total degree and as sub-dimensions (planning - implementation - evaluation).
- Determining the extent to which the level of availability of education skills for sustainable development of primary school teachers in Al-Ahmadi Governorate varies significantly according to variables: gender - number of years of experience - specialization - educational qualification.

Importance of the study:

Describe the actual reality of the role played by the management capacity of executive managers as a predictor variable on the sustainable performance of business establishments as a modified variable, and understand the direct and indirect impacts of the effects of that ability on the performance of shares, in light of the modified role of the sustainable performance of the companies issuing those shares. In practical terms, the importance of the study is evident from the importance of the topic it focuses on, as the study focuses on education for sustainable development, which many studies have proven its great importance in improving the various learning outcomes of students associated with sustainable development at all educational levels, especially in the primary stage, which is the basis for all educational stages.

Since teachers are the cornerstone of the educational process for children, their practices serve as the main crossing point for the



application of modern educational trends on the ground. Hence, the importance of the study is evident in that it reveals, using the scientific method, the extent to which education skills for sustainable development are applied, which can be very useful in the efforts made to actually apply the idea of education

In the theoretical aspect, the importance of the study is evident in the fact that it is one of the few studies - as far as the researcher knows - that focuses on the skills of education for sustainable development that teachers must have and measure their availability, and thus the study provides enrichment of the literature on the subject of education for sustainable development ..

Study limits:

The study adheres to the following limits:

- A- **Human and spatial boundaries:** Applying the study to a random sample of primary school teachers in Ahmadi Governorate.
- B- **Time limits:** Field application of the study during the academic year 2022-2023.
- C- **Subject Limits:** Education for Sustainable Development Skills in Planning, Implementation and Evaluation Using a descriptive survey approach based on the questionnaire tool to assess the availability of education skills for sustainable development among teachers. Limited to gender variables, number of years of experience, type of school, academic qualification and specialization.

Sustainable development:

Sustainable development can be defined as "the type that is development that meets the needs of the present without compromising the ability of future generations to meet their own needs, and sustainable development calls for concerted efforts to build a future for people and the planet that is inclusive and sustainable" (Mahmoud Eid, 2019, p. 324).



Education for sustainable development:

Education for sustainable development is a cultural tool that enables individuals to employ the knowledge, skills, values, and trends they have acquired in the development and development of their societies to build a sustainable future in which well-being and social justice are achieved for present and future generations (Aisha Al-Dadjaj, 2017, p. 258).

Education for sustainable development:

Is the kind of education that enables people to propose solutions to environmental and sustainability issues that threaten and endanger people's livelihoods (Thenga, 2020, p. 9).

Education Skills for Sustainable Development:

Education skills for sustainable development are defined as "the speed and accuracy in performance that teachers must have at the primary level with regard to the planning, implementation and evaluation of students' learning, which focuses on the concepts, ideas, values and trends of sustainable development, and is measured procedurally in the current study to the degree obtained by the teachers participating in the questionnaire designated for this purpose".

Previous studies:

- Sinakou, et al., 2022

Aimed to reveal teachers' interests and teaching practices already oriented in ESD. The study relied on a qualitative approach, and the data was collected through the ESD Action Orientation Questionnaire that includes examples illustrating different educational practices as well as a set of open-ended questions. The data were analysed using the thematic analysis method. The results of the study revealed that teachers have little interest in this approach and carry out very limited teaching practices in the



context of the orientation of work in ESD. Hence, teachers often apply teaching practices that are almost not actually directed.

- **Fischer, King, Rieckmann, Barth, Büssing, Hemmer & Lindau-Bank, 2022**

This study aimed to carry out a systematic review of the literature based on qualitative analysis of about (158) articles and a refereed study that dealt with the preparation of teachers for sustainable development. The results of the study found that research in preparing teachers for sustainable development is an evolving field based on five types of inquiry: designing learning environments, understanding learner characteristics, measuring learning outcomes, promoting systems change, and providing advanced insights for domain development. The findings also indicated that the most prominent potential for innovation in teacher preparation for sustainable development in the context of public teacher education programs are a focus on the major social and environmental challenges of our time, methodological approaches to address the diversity of knowledge (e.g., interdisciplinarity, interdisciplinary approaches), and approaches to sustainability science learning (e.g., backcasting.)

- **The Sinakou study (2022)**

Aimed to reveal the beliefs, interests and teaching practices of teachers in the context of education for sustainable development. The study relied on a quantitative survey methodology, and data was collected through a questionnaire to measure inclusive, multiple, and already oriented educational practices in ESD and the associated beliefs and interests of teachers. The study sample consisted of a group of primary and secondary teachers in Flemish. The results showed a gap between: (a) teachers' educational beliefs and practices.



- **Maha Al-Dhafiri and Abdullah Al-Harbi (2021)**

The study aimed to identify the characteristics of sustainable development in education, and to measure the extent to which secondary school teachers are aware of the dimensions of sustainable development. To achieve the objectives of the study, the study adopted the descriptive and analytical approach. To collect data, a questionnaire was prepared to measure the extent of teachers' awareness of sustainable development through the three dimensions (the environmental dimension, the social dimension and the economic dimension). The study was applied to a sample of (60) secondary school teachers in the State of Kuwait. The results showed a high level of awareness of secondary school teachers in the State of Kuwait of the dimensions of sustainable development, and the dimensions were as follows: the environmental dimension, the second place the economic dimension, and the last place came the social dimension. The study recommended the need to establish sustainable educational projects and train secondary school teachers more to consolidate the concept of sustainable development and contribute to raising social awareness of sustainable development in society. As well as discussing, consolidating and activating the concept of sustainable development in schools and among teachers, especially through the teacher. And work to encourage the teacher through promotion.

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- **Heba Mohamed's study (2021)**

The study aimed to identify the level of practice of distance teaching skills by public education teachers during the Corona pandemic (Covid-19) and to know the level of difference in that practice according to the following variables: (service in teaching, academic stage, specialization). Determining the impact of the interaction of both (gender and educational level) on students' awareness of sustainable development, as well as revealing the nature of the relationship between thinking styles and awareness of sustainable development. And the possibility of predicting sustainable development in students through their ways of thinking. To achieve the objectives of the study, the



descriptive survey approach was employed, both in its comparative correlational parts. The study was applied to a sample selected by stratified random method of public education teachers in the three primary, middle and secondary school stages in Abqaiq Governorate and its Al-Hajar in the Eastern Province, whose strength reached (201) teachers. The data collection tool was a measure of the degree of students' awareness of the dimensions of sustainable development, and was distributed into four dimensions (the social field, the environmental field, the economic field, and the technological field).

The results of the study revealed that the level of practice of working education teachers for the skills of using computers, the Internet, learning systems and evaluating students' learning during the Corona pandemic was high, while the level of practice of general education teachers for the skills of planning and implementing the virtual session was very high, and the results also showed that there were statistically significant differences due to the service variable in teaching in the skill of using computers, the Internet and learning systems in favor of teachers with less years of service, as well as the results highlighted the existence of statistically significant differences in the skill of The use of computers, the Internet and learning systems is due to the specialization of the teacher, and the results showed that there were no statistically significant differences attributed to the variable of the school stage in all skills.

- **Salem Al-Enezi Study (2021)**

The study tried to identify the level of inclusion of sustainable development areas in the book of language competencies at the secondary stage in the Kingdom of Saudi Arabia. The study employed a descriptive and analytical research methodology.

And the method of content analysis, and the study tool was a content analysis card, which included a list of a number of sustainable development indicators distributed on four dimensions (social, economic, environmental, institutional field), and the study sample consisted of books of language competencies for the secondary trip courses system, and the results revealed that the social field came first, followed by the institutional field, then the economic field, in second place, and the economic field in the third field; and the environmental field came at the fourth level.

- **Sinakou, Donche, Boeve-de Pauw & Van Petegem, 2021**

Aimed to describe and validate the ESD questionnaire, a questionnaire that measures teachers' beliefs and teaching practices in ESD. The study relied on a mixed approach to the research, and the scale preparation process included a survey application in order to select participants for personal interviews, review of statements by experts in the specialty, cognitive test, exploratory test, as well as the main study. Confirmatory factor analysis, stability calculation and statement correlation analysis were applied in the context of the scale validation process. The final version of the ESD questionnaire consisted of a subscale of educational beliefs and a subscale of educational practices. The results showed that both measures had good indicators of suitability. The values of the Cronbach alpha coefficient for the sub-scales ranged from (0.90 – 0.97), indicating a good degree of internal consistency, and the correlations between the statements showed a good degree of discriminatory truthfulness. From these findings, the study concluded that the questionnaire could be used in the context of ESD-related research and practice.



- **Kušić & Hasel (2021)**

The study aimed to reveal the competencies of adult education teachers necessary to implement sustainable development. The study was based on a quantitative survey methodology, and the data was collected through a survey questionnaire applied to a sample of (86) teachers working in the field of adult education in Croatia. The results showed that teachers often expressed positive attitudes; It was also found that despite this, teachers assessed themselves as having most, if not all, of the general and specific competencies needed for sustainable development, and teachers' self-evaluation showed that they had, in part, competencies directly related to the implementation of sustainable development in adult education teaching processes.

- **Study by Maha Al-Anzi and Najwa Jamal Al-Din (2020)**

The objective of the study was to identify the nature of education for sustainable development, identify the problems and challenges facing pre-school education for sustainable development, and identify its most important requirements and ways to overcome those challenges. The study was carried out following a descriptive and analytical research methodology based on content analysis and literature relevant to the subject of the study, and the concept of learning for sustainable development in pre-school education was defined. Identify the most important obstacles facing pre-school education for sustainable development, the most important of which were: Structural obstacles: summarized in the multiplicity of structures and bodies concerned with early childhood in most Arab countries; Lack of long-term strategies: One of the most important reasons behind this is the absence of a fixed system and a plan of action and the change of officials in charge of the various structures, in addition to the absence of an objective



evaluation of the experiences, initiatives and programs that are applied ..Limited or insufficient financial and human resources: the most important of which is the limited material resources available, and the lack of qualified and trained cadres in this field. Low rate of early childhood absorption: which leads to the presence of most of them away from all the care and education provided in early education in general, and for sustainable development in particular Lack of scientific studies and specialized research on this subject: and the lack of maximum benefit from what is provided, in the absence of coordination between information centers. The study found that there are a number of requirements for achieving pre-school education for sustainable development, which can be identified as follows: the presence of teachers who can direct children's attention to various sustainability questions, within play-based activities; Strive for development, openness, respect and empathy in situations and provide assistance to children; Broaden the understanding of the just rights of all human beings; respect for all living beings and the ability to discover and reflect; develop children's knowledge of science and relationships with nature; the teacher pains children's attention to the environmental, social, cultural and economic aspects of most of the topics in which children participate in early education; the adoption of education on the idea of making the concept clear and tangible to the learner; and the development of the concept of environmental awareness among pre-school children .

Comment on previous studies:

It is clear from the presentation of previous studies that studies differ in terms of dealing with sustainable development, some of which focused on conceptual rooting, and some of them dealt with the dimensions of sustainable development according to some variables and the extent of vulnerability, as evidenced by



previous studies emphasizing the importance of research and investigation in the dimensions of sustainable development. The study differed from previous studies in addressing the shortcomings in the application of sustainable development in primary schools and revealing the role and requirements of sustainable development in the development of primary schools in the State of Kuwait. The current study agreed with some previous studies on the development of education for sustainable development, presenting the experiences of some countries in the field of sustainable development, and focusing on the importance of concerted efforts to achieve sustainable development.

The research benefited from the previous studies in clarifying the relationship between culture and the three aspects of development: economic, social and environmental, and determining the nature of education for sustainable development, and highlighting that the goal of the eco-schools program is the integration of sustainable development with the environment, in addition to identifying educational requirements to achieve environmental responsibility and the phenomenon of green growth, which is a performance to achieve sustainable development, and also the results of some previous studies were used to crystallize the research problem.

Theoretical framework of research

First: Developing teachers' teaching skills:

Teachers' teaching skills and competencies can be developed through a range of different methods and methods, the most prominent of which are: Training Courses: Making training courses with content that focuses on developing effective teaching skills helps the teacher to convey the impact and content of these courses to students in the classroom, by practicing effective teaching methods and methods that have been known, and worked to improve and develop his performance in addition to knowing the weaknesses



In his previous teaching methods, and enhancing the teacher's ability to develop and achieve, all of this will reflect positively on the competencies, skills and strategies applied in the classroom by the teacher, and then on the student's educational outcomes (Sarah Al-Nuaimi, 2020, p. 22).

Practical education:

It is based on the preparation of teachers in the faculties of education on two complementary aspects in addition to the theoretical preparation in the scientific and educational material, which constitutes the necessary knowledge framework for him in the future, and the other side of the preparation is the field applied side, which is called the term practical education, during which students are trained on the basic skills necessary for the teaching profession in actual situations within the classrooms, and this begins starting from the third year, where the student-teacher begins to move from the study stage within the faculties Education to the field of application and contact with the reality that he will work in after graduation, and the period of practical education is one of the most fertile periods in the lives of students of faculties of education, in which they learn about the characteristics of the profession in which they will specialize and realize that education is a human-to-human relationship by human means, and practical education is an opportunity for the future teacher to learn some of the characteristics of the school system, and practically realize the importance of school administration.

Micro-teaching:

With the increase in the number of student teachers in the faculties of education as well as the increase in the faculties of education, those responsible for practical education tended to think about using new methods next to practical education in order to develop the teaching skills of student teachers, and among these methods is the micro-teaching method, which some studies have



proven effective in developing the teaching skills of student teachers, and one of the advantages of using the micro-teaching method is that it addresses the criticism directed at practical education in its inability to achieve tangible progress in Mastering teaching skills, and the micro-teaching method is based on separating teaching skills into a number of yellowed educational situations and continuing to teach on each teaching skill separately in a number of teaching situations until it is mastered, which cannot be facilitated in the school atmosphere where the student faces the teacher with the overall educational situation once and he must fit with it as a whole Thus, training in teaching skills using the practical education method in its current state may lead to the graduation of stereotypical teachers formed in one mold, and the micro-teaching method is relatively new in the learning and training of student teachers (Imam Hamida, et al., 2003, p. 26).

Through the foregoing, the researcher sees that teaching skills are not considered as inherited or acquired behavior or a trait of the teacher, but these skills come through training and continuous professional development for teachers in each field, through the teacher receiving a set of trainings, training courses and professional development, he develops many of the skills and competencies required to keep pace with technological developments and the requirements of the current digital age, through these training courses and various programs, the teacher is trained on modern teaching methods that enable him to Using technology as required and developing teaching methods in the classroom and the entire educational process, and those in charge of preparing these training programs and professional courses must take into account the different skills and abilities of teachers and their individual differences to enable them to have effective teaching skills in productive manner.



Second: The concept of education for sustainable development:

Education for sustainable development is an integral part of quality education and is one of the essential components of lifelong learning, all educational institutions from pre-school to tertiary education, including non-formal education institutions, should focus on addressing sustainable development issues and supporting the development of competencies related to sustainability as part of addressing sustainable development issues and supporting the development of competencies related to sustainability as part of their responsibilities. For sustainable development is an education of importance to all learners in light of the challenges in today's world (Samah Al-Ghareez, 2019, pp. 16-17).

Education for sustainable development is an educational vision that seeks to find a balance between human and economic prosperity and cultural traditions and the sustainability of natural and environmental resources for a better life for the individual and society in the present and for future generations, and the application of the principles of education for sustainable development requires reliance on multi-purpose educational methodologies and approaches to ensure lifelong moral learning for all groups of society and regions and encourage respect for human needs that are compatible with the sustainable and balanced use and conservation of natural resources for Humanity in its present and future (UNESCO, 2013).

The concept of sustainable development and education for sustainable development is one of the serious topics in the educational field, and it can be said that education for sustainable development is part of the sustainable development policy, where governments try to bridge the gap between values and behaviors, and bridge the gap between what we must do in fighting climate change, and what we do on the ground, and the concept of sustainability can be developed as one of the mental frameworks,



and within this framework, education for sustainable development is one of the Ways to demonstrate key values and beliefs by exploring contradictions about the environment and making better use of natural resources (Ditt, 2009).

Munira Darwish (2021) summarized that education for sustainable development is a flexible education whose subjects can be adapted to the basic standards of the state Common core state standards, as well as the Next Generation Science Standards, to connect students to real-world issues, and facilitate communication mechanisms between teachers, students and the complex by providing an attractive educational context that seeks to prepare a generation capable of solving problems, innovating solutions to various societal issues, and possessing life and technological skills (pp. 3-4).

Third: Education Skills for Sustainable Development:

Sustainable development focuses on improving the quality of the environment and the quality of life by working to achieve equitable economic growth. In order to achieve sustainable development, we need to take the necessary actions and measures to address the challenges of sustainable development. In this regard, ESD has great potential to help students become – as adults – capable of developing competencies and actions geared towards sustainable development issues. Teaching practices in the context of ESD teaching in particular – applied by teachers in the classroom – play an important and vital role in this issue (Sinakou, 2022).

Pedagogical practices in ESD are believed to play a critical role in developing students' practical competencies relevant to sustainable development issues (Sinakou, Donche & Van Petegem, 2022). The results of the Imara & Altinay study (2021) indicate that there has been a growing interest in the last decade in developing a set of ESD competencies for teachers, revealing the absence of a



unified framework or model for developing the competencies needed for teachers related to ESD.

Several studies indicate that the implementation of sustainable development is a teacher-intensive issue that requires knowledge of a specific package of knowledge and capacities. It is therefore important to identify the competencies that teachers need so that they can develop and implement ESD and achieve the specific learning goals they seek for their students. ESD requires a specific, more comprehensive focus on teaching, which raises questions about building appropriate competencies while preparing teachers. Teachers should have insight from a constructivist perspective, meaning that the acquisition of these competencies is an active, effective and self-directed process that can be strengthened in the teacher provided that he or she already has the foundation (Aceska & Nikoloski, 2019).

In the present study, ESD skills are defined as "the speed and accuracy in performance that primary school teachers must have with regard to lesson planning, implementation and evaluation of pupils' learning, which focuses on the concepts, ideas, values and trends of sustainable development, and is measured procedurally in the present study to the degree obtained by teachers participating in the questionnaire dedicated to this purpose.

Field Study

Study Sample:

Description of the Survey Sample of the Study: The survey sample of the study consisted of (111) male and female teachers who are not participating in the study. Description of the basic sample of the study: The study was applied to a sample of (204) male and female teachers. The following is the distribution of the sample according to the personal variables of the participants, namely (type - number of years of experience - type of school - number of training courses in sustainable development).

The results of the study questions are presented as follows: Presentation, discussion and interpretation of the results of the second question: The second question stated "What is the availability of education skills for sustainable development among primary school teachers in Al- Ahmadi Governorate as a total score and as sub-dimensions (skills related to educational objectives - skills related to educational content - skills related to educational strategies - skills related to educational activities - skills related to educational technology - skills related to evaluation)?" . To answer this question, the data were classified in ordered tables, and the frequencies, percentages, arithmetic averages, standard deviations and relative weights of each statement were calculated, and the results were arranged according to the values of the arithmetic averages of the questionnaire phrases and their general average, and the results were interpreted based on the value of the arithmetic mean, where a criterion for judgment was determined when discussing and interpreting the results of the tables. This is as follows: Range = (Largest value of answer categories - lowest value of answer categories) = 3-1 = 2, number of categories = 3 categories, and length of category = range ÷ Number of categories = 2÷3 = 0.67 Accordingly, the criterion (0.67) was used when discussing and interpreting the results of the tables, as shown in the following Table (1):

Table (1): The criterion for judging arithmetic averages when discussing and interpreting results

N	Arithmetic Average		Jugement criterion
	from	To	
1	1	1.67	With a waek score
2	1.68	2.34	With a medium score
3	2.35	3	With a large degree

Table (2) below shows the overall results related to "Availability of Education Skills for Sustainable Development among Primary School Teachers in Ahmadi Governorate".

Table (2): Overall Results on the Availability of Education for Sustainable Development Skills among Primary School Teachers in Ahmadi Governorate (n=204)

Main Dimentions	Number of phrases	SMA	Standered deviaion	Relative weight	Availability	Rank
The first dimation: skills of educational goals	8	2.603	0.565	86.7%	Big	2
The second dimation: Skills related to educational content.	5	2.613	0.562	87.0%	Big	1
The third dimension: Skills related to educational strategies.	7	1.671	0.490	55.6%	Weak	5
The fourth dimension: Skills related to educational activities.	7	1.973	0.244	65.7%	Medium	3
The fifth dimension: Skills related to educational technology.	7	1.617	0.506	53.8%	Weak	6
The sixth dimension: Skills related to evaluation.	10	1.678	0.539	55.9%	Weak	4
General arithmetic average of questionair.	44	2.026	0.484	67.5%	Moderately	

It is clear from the previous table (2) that:

- the general arithmetic average of the questionnaire as a whole reached (2.026), which reflects the level of (average) of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate, and it is clear that the level of availability of skills in all dimensions has ranged between (weak) and (large).
- It came in first place as the highest dimension in the rank "The second dimension: skills related to educational content" with a

degree of availability (large) and an arithmetic average (2.613), followed by "The first dimension: skills related to educational objectives" with a score of (large) and an arithmetic average (2.603), followed by "The fourth dimension: skills related to educational activities" with a score of (medium) and an arithmetic average (1.973), followed by the fourth place "The sixth dimension: Assessment skills" with a score (poor) and an arithmetic average (1.678), followed by fifth place" The third dimension: skills related to educational strategies" with a score of (weak) and an arithmetic average (1.671), and came in the sixth and last place as the lowest dimension in the rank "The fifth dimension: skills related to educational technology" and a score (weak) and an arithmetic average (1.617). The following figure (1) provides a graphical representation of these results:



Figure (1): Arithmetic averages of "Availability of Education Skills for Sustainable Development for Primary School Teachers in Ahmadi Governorate"

The following table (2) shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational objectives".

Table (3): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational objectives" (n = 204)

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Relative criterion	Availability	Arrangement
			Significantly	Medium	Weak					
1	I formulate behavioral learning objectives related to sustainable development whenever possible	F	144	59	1	2.701	0.470	89.9%	significant	1
		%	70.6	20.9	0.5					
2	I concentrate on objectives related to sustainable development to increase students awareness of sustainable development concepts	F	122	73	9	2.554	0.580	85.0%	significant	5
		%	59.8	35.8	4.4					
3	Formulate goals that focus on developing students' positive attitudes to the environment and sustainable development issues	F	145	47	12	2.652	0.588	88.3%	significant	4
		%	71.1	23.0	5.9					
4	Formulate objectives that focus on developing students' responsible environmental behavior	F	148	47	9	2.681	0.554	89.3%	significant	2
		%	72.5	23.00	4.4					
5	Itake into consideration formulating objectives that focus on the balance between cognitive, emotional and psychomotor goals	F	118	77	9	2.534	0.582	84.4%	significant	7
		%	57.8	37.7	4.4					
6	Educational objectives related to sustainable development should be realistic and achievable in the teaching time available	F	123	69	12	2.544	0.606	84.7%	Significant	6
		%	60.3	33.8	5.9					

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Relative criterion	Availability	Arrangement
			Significantly	Medium	Weak					
7	Educational objectives related to sustainable development should be precedural	F	113	79	12	2.495	0.608	83.1%	significant	8
		%	55.4	38.7	5.9					
8	Use educational objectives related to sustainable development to follow students learning and guide teaching.	F	141	57	6	2.662	0.533	88.6%	significant	3
		%	69.1	27.9	2.9					
General arithmetic average for the first dimension						2.603	86.7%	Significant		

It is clear from the previous table (3) that the arithmetic average of the first dimension as a whole has reached (2.603), which reflects the (large) level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational objectives", and it is clear that the level of availability of skills in all phrases has come (large). In the first rank as the highest phrase in the rank and with a degree of availability (large) came statement No. (1) "I formulate behavioral educational objectives related to sustainable development whenever possible" with an arithmetic average of (2.701), followed in the second rank and with a degree of (large) statement No. (4) "I formulate goals that focus on developing responsible environmental behavior among students" with an arithmetic average of (2.681). (In the seventh place and with a degree (large) came phrase No. (5) "I take into account in formulating goals that focus on sustainable development the balance between cognitive and emotional goals and psychomotor" with an arithmetic average of (2.534), and it came in eighth and last place as the lowest phrase in

rank and with a degree (large) Statement No. (7) "I take into account that the educational goals associated with sustainable development are procedural with an arithmetic average of (2.495).

The following figure (6) provides a graphical representation of these results:

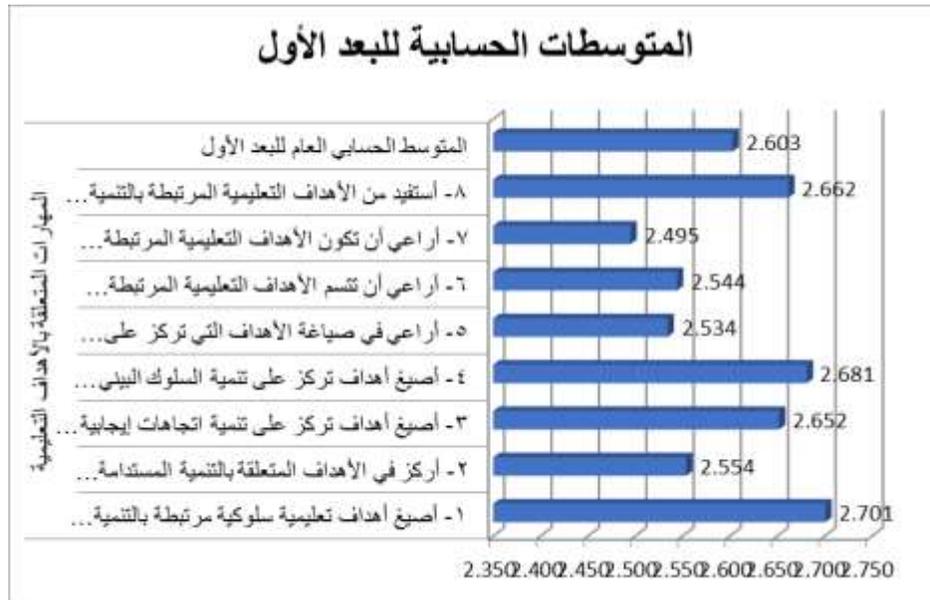


Figure (2): Arithmetic averages of teachers' scores in the dimension: "Skills related to educational objectives"

The following table (4) shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational content".

Table (4): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational content" (n = 204).

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Proportional scale	Availability	Arrangement
			Significantly	Medium	Weak					
1	Elicit concepts of sustainable development that are emphasized in the content of the textbook	F	135	63	6	2.632	0.541	87.7%	significant	2
		%	66.2	30.9	2.9					
2	Enhance educational content through resources related to the realities of students' lives and local.	F	136	56	12	2.608	0.598	86.8%	significantly	4
		%	66.7	27.5	5.9					
3	In presenting educational content related to sustainable development, I take into account the balance between the three pillars, environmental, social and economic	F	132	66	6	2.618	0.544	87.2%	كبيرة	3
		%	64.7	32.4	2.9					
4	I help my students to enrich the educational content related to sustainable development through print, and electronic resources	F	114	78	12	2.500	0.608	83.3%	كبيرة	5
		%	55.9	38.2	5.9					
5	Gradient my presentation of sustainable development content from public to private and from simple to complex	F	150	48	6	2.706	0.517	90.1%	significant	1
		%	73.5	23.5	2.9					
General arithmetic average for the second dimension						2.613	86.7%	Significant		

It is clear from the previous table (4) that:

- The arithmetic average of the second dimension as a whole has reached (2.613), which reflects the level of (large) availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational content", and it is clear that the level of availability of skills in all phrases has come (large).
- Statement No. (5) "I am graded in the presentation of content related to sustainable development from general to specific and from simple to complex" with an arithmetic average of (2.706), followed by statement No. (1) "I devise sustainable development concepts that are focused on in the content of the textbook" with an arithmetic average of (2.632).
- In fourth place and with a (large) degree came statement No. (2) "I enhance educational content through sources related to the reality of students' lives and their local environment" with an arithmetic average of (2.608), and it came in fifth and last place as the lowest phrase in the rank and with a degree of (large) statement No. (4) "I help my students enrich educational content related to sustainable development through print and electronic sources" with an arithmetic average of (2.500).

The following figure (3) provides a graphical representation of these results:

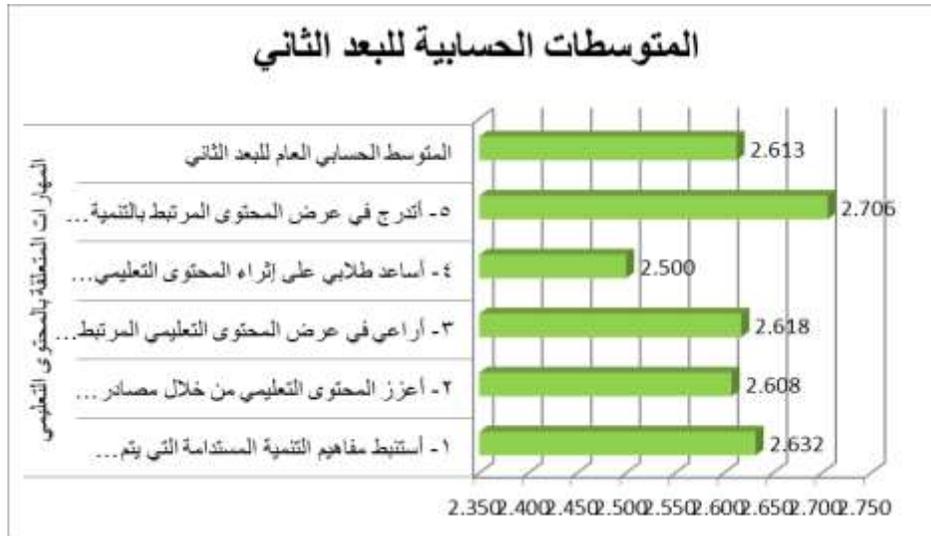


Figure (3): Arithmetic averages of teachers' scores in the dimension: "Skills related to educational content"

The following table (5) shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational strategies."

Table (6): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational strategies" (n=204)

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Relative criterion	Availability	Arrangement
			Significantly	Medium	Weak					
1	In my teaching for sustainable development, I employ strategies that encourage dialogue and discussion in the classroom, such as brainstorming	F	2	158	44	1.794	0.429	59.7%	medium	1
		%	1.0	77.5	21.6					
2	Employ strategies that encourage students to play roles related to some sustainable development issues	F	3	118	83	1.608	0.519	53.5%	Weak	6
		%	1.5	57.8	40.7					
3	I employ strategies that require learners to solve environmental problems in creative ways.	F	3	130	71	1.667	0.503	55.5%	Weak	5
		%	1.5	63.7	34.8					
4	I employ strategies that require students to prepare projects on sustainable development issues	F	3	103	98	1.534	0.529	51.1%	Weak	7
		%	1.	50.5	48.0					
5	Employ strategies that require students to think ahead about the effects of human activities on the environment	F	3	138	63	1.706	0.488	56.8%	medium	2
		%	1.5	67.6	30.9					
6	Employ strategies that require students to participate in environmental protection and community service.	F	2	136	66	1.686	0.486	56.2%	متوسطة	4
		%	1.0	66.7	32.4					
7	Employ cooperative learning strategies among students on some sustainable development issues	F	2	139	63	1.701	0.480	56.6%	medium	3
		%	1.0	68.1	30.9					
General arithmetic average for the third dimension						1.671	55.6%	Weak		

It is clear from the previous table (6) that:

- the arithmetic average for the third dimension as a whole has reached (1.671), which expresses the level of (weak) availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational objectives", and it is clear that the level of availability of skills in all statements has ranged between (weak) and (medium)
- In the first rank as the highest statement in the rank and with a degree of availability (medium) was phrase No. (1) "I employ in my teaching for sustainable development strategies that encourage dialogue and discussion in the classroom such as brainstorming" with an arithmetic average of (1.794), followed by in the second rank and with a degree (medium) statement No. (5) "I employ strategies that require students to think ahead about the effects of human activities on the environment" with an arithmetic average of (1.706).
- Phrase No. (2) "employ strategies that encourage students to play roles related to some sustainable development issues" came in sixth place with an arithmetic average of (1.608), and it came in the seventh and last place as the lowest statement in rank and with a degree (weak) statement No. (4) "Employ strategies that require students to prepare projects on sustainable development issues" with an arithmetic average of (1.534). The following figure (8) provides a graphical representation of these results:



Figure (4): Arithmetic averages of teachers' scores in the dimension: "Skills related to educational strategies"

The following table (7) shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational activities".

Table (7): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational activities" (n = 204)

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Proportional criterion	Availability	Arrangement
			Significantly	Medium	Weak					
1	Employ educational activities that enhance students' awareness of their roles in sustainable development	F	3	192	9	1.971	0.24 1	65.6%	medium	4
		%	1.5	94.1	4.4					
2	I apply some activities that encourage students to practice environmental citizenship and responsible environmental behavior.	F	4	191	9	1.975	0.25 2	65.8%	medium	3
		%	2.0	93.6	4.4					
3	Train students to analyses different ecosystems and human impact on them.	F	2	193	9	1.966	0.23 0	65.5%	medium	5
		%	1.0	94.6	4.4					
4	Apply activities to train students on modeling and applying them to sustainable development issues.	F	4	194	6	1.990	0.22 2	66.3%	medium	2
		%	2.0	95.1	2.9					
5	I apply activities that encourage students to critically analyze negative global activities that deplete and pollute environmental resources	F	4	185	15	1.946	0.30 1	64.8%	medium	7
		%	2.0	90.7	7.4					
6	I apply educational activities that encourage students' creative design thinking on some environmental issues	F	4	188	12	1.961	0.27 8	65.3%	متوسطة	6
		%	2.0	92.2	5.9					
7	I apply activities that enhance students' ability to interpret factors affecting environmental problems	F	4	197	3	2.005	0.18 6	66.8%	medium	1
		%	2.0	96.6	1.5					
General arithmetic average for the fourth dimension						1.973	65.7%	medium		

It is clear from the previous table (7) that:

- The arithmetic average for the fourth dimension as a whole has reached (1.973), which expresses the level of (average) of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational activities", and it is clear that the level of availability of skills in all phrases has come (average). Statement No. (7) "I apply activities that enhance students' ability to interpret factors affecting environmental problems" with an arithmetic average of (2.005), followed by phrase No. (4) "I apply activities to train students on modeling and its application in sustainable development issues" with an arithmetic average of (1.990).
- In sixth place and with a grade (medium) came statement No. (6) "I apply educational activities that encourage students to think design and creative in some environmental issues" with an arithmetic average of (1.961), and it came in the seventh and last place as the lowest phrase in rank and with a degree (medium) statement No. (5) "I apply activities that encourage students to critically analyze negative global activities that deplete environmental resources and pollute them" with an arithmetic average of (1.946). The following figure (5) provides a graphical representation of these results:

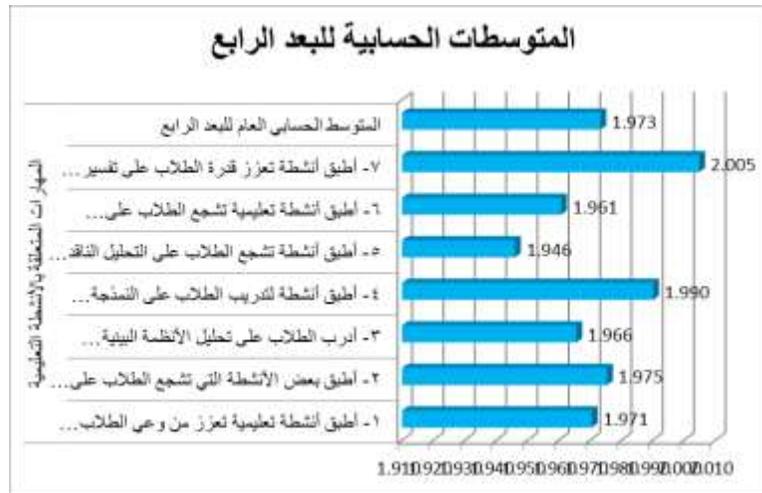


Figure (5): Arithmetic averages of teachers' scores in the dimension: "Skills related to educational activities"

Table (8) below shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational technology".

Table (8): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills associated with educational technology" (n=204)

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Proportional criterion	Availability	Arrangement
			Significantly	Medium	Weak					
1	Use YouTube videos about environmental pollution and the depletion of natural resources	F	2	139	63	1.701	0.480	56.6%	Medium	1
		%	1.0	68.1	30.9					
2	I use images related to students' local environment that illustrate some of the issues related to sustainable development.	F	3	129	72	1.662	0.504	56.3%	Weak	2
		%	1.5	63.2	35.3					
3	I use models to illustrate some environmental phenomena and problems	F	2	115	87	1.583	0.514	52.7%	Weak	5
		%	1.0	56.4	42.6					
4	Use some social media to create a virtual community of students to discuss sustainable development issues (such as WhatsApp groups, Facebook, etc)	F	3	126	75	1.647	0.509	54.8%	Weak	3
		%	1.5	61.8	36.8					
5	I encourage students to use some social media to express their views on sustainable development, such as blogs, Twitter, etc..	F	2	119	83	1.603	0.510	53.4%	Weak	4
		%	1.0	58.3	40.7					
6	I encourage students to present multimedia that express their sustainable development-related learning.	F	1	116	87	1.578	0.505	52.6%	Weak	6
		%	0.5	56.9	42.6					
7	I encourage students to use participatory editing platforms such as wiki editors to make reports and research related to sustainable development	F	2	107	95	1.544	0.519	51.4%	Weak	7
		%	1.0	52.5	46.6					
General arithmetic average for the fifth dimension						1.617	53.8%	Weak		



It is clear from the previous table (8) that:

- The arithmetic average of the fifth dimension as a whole has reached (1.617), which reflects the level of (weak) availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to educational technology", and it is clear that the level of availability of skills in all phrases has ranged between (weak) and (medium)
- In the first place as the highest phrase in the rank and with a degree of availability (medium) was phrase No. (1) "I employ videos from YouTube about the manifestations of environmental pollution and the depletion of natural resources" with an arithmetic average of (1.701), followed in the second place with a (weak) score of phrase No. (2) "I use pictures related to the local environment of students that illustrate some issues related to sustainable development" with an arithmetic average of (1.662).
- In sixth place and with a score (weak) came statement No. (6) "I encourage students to present multimedia that expresses their learning related to sustainable development" with an arithmetic average of (1.578), and came in seventh and last place as the lowest phrase in rank and with a score of (weak) statement No. (7) "I encourage students to use participatory editing platforms such as wiki editors to make reports and research related to sustainable development" with an arithmetic average of (1.544). The following figure (6) provides a graphical representation of these results:

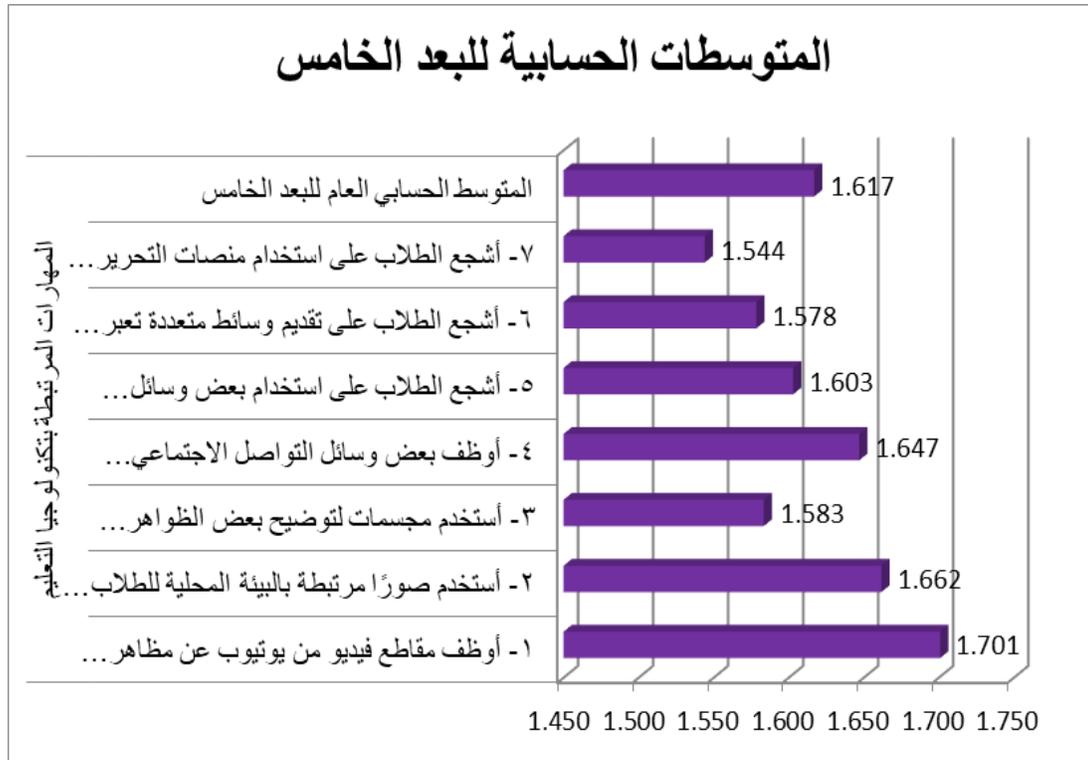


Figure (6): Arithmetic averages of teachers' scores in the dimension:
"Skills related to educational technology"

The following table (9) shows the results related to "the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to assessment."

Table (9): Descriptive statistics of the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to evaluation" (n = 204)

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Proportional criterion	Availability	Arrangement
			Significantly	Medium	Weak					
1	I use portfolio to documentate students' activities related to sustainable development.	F	7	124	73	1.676	0.53 7	55.8%	Weak	5
		%	3.4	60.8	35.8					
2	I use essay tests to assess students' cognitive aspects related to sustainable development.	F	7	117	80	1.642	0.54 8	54.7%	Weak	8
		%	3.4	57.4	39.2					
3	I apply questionnaires and scales to assess students' attitudes towards environmental issues.	F	7	113	84	1.623	0.55 2	54.0%	Weak	9
		%	3.4	55.4	41.2					
4	I use observation tools to assess students' environmental behavior	F	7	109	88	1.603	0.55 6	53.4%	Weak	10
		%	3.4	53.4	43.1					
5	Employ performance assignments to assess students' skills related o sustainable development.	F	8	139	57	1.760	0.51 2	58.6%	Medium	2
		%	3.9	68.1	27.9					
6	Employ real-life environmental problems from students' lives to assess their performance on sustainable development issues	F	8	119	77	1.662	0.55 1	55.3%	Weak	6
		%	3.9	58.3	37.7					
7	I evaluate students relying on survey projects and their participation in community service and the local environment.	F	8	117	79	1.652	0.55 4	55.0%	Weak	7
		%	3.9	57.5	38.7					
8	i provide students with contentious feedback on their performance in relation to sustainable development	F	8	124	72	1.686	0.54 3	56.2%	Medium	4
		%	3.9	3.9	35.3					

N	Phrases	Ratios and frequencies	Alternative Responses			Arithmetic average	Standard deviation	Proportional criterion	Availability	Arrangement
			Significantly	Medium	Weak					
9	I benefit from the results of students' assessment in relation to sustainable development to improve their learning	F	7	7	70	1.691	0.53 2	56.3%	Weak	3
		%	3.4	3.4	34.3					
10	I encourage students to evaluate themselves and their peers and reflect on their sustainable development-related learning	F	8	8	52	1.784	0.49 9	59.4%	Medium	1
		%	3.9	3.9	25.5					
General arithmetic average for the sixth dimension						1.678	55.9%	Weak		

It is clear from the previous table (9) that:

- the arithmetic average of the sixth dimension as a whole has reached (1.678), which expresses the level of (weak) availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate in the dimension of "skills related to evaluation", and it is clear that the level of availability of skills in all statements has ranged between (weak) and (average). In the first place came as the highest statement in the rank and with a degree of availability (medium) statement No. (10) "I encourage students to evaluate themselves and their peers and reflect on their learning related to sustainable development" with an arithmetic average of (1.784), followed in the second rank and with a (medium) score (5) "I employ performance tasks to assess students' skills related to sustainable development." with an arithmetic average of (1.760).
- In the ninth place and with a (weak) degree came statement No. (3) "I apply questionnaires and scales to assess students' attitudes towards environmental issues" with an arithmetic average of (1.623), and it came in the tenth and last place as the lowest

phrase in the rank and with a degree (weak) statement No. (4) "I use observation tools to assess students' behavior related to the environment" with an arithmetic average of (1.603).

The following figure (11) provides a graphical representation of these results:



Figure (7): Arithmetic averages of teachers' scores in the dimension: "Skills related to evaluation"

Thus, the researcher has answered the second question, which reads: "What is the availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate as a total score and as sub-dimensions (skills related to educational objectives - skills related to educational content - skills related to educational strategies - skills related to educational activities - skills related to educational technology - skills related to evaluation)?" Presentation, discussion and interpretation of the results of the third question:

The third question stated: "Does the level of availability of education skills for sustainable development among primary school

teachers in Ahmadi Governorate differ significantly according to variables: (type - experience - type of school - training courses)?". To answer this question, the researcher formulated the main statistical hypothesis of this study, which stated that "there are no statistically significant differences in the average scores of the participants in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to variables: (type - specialization - experience - type of school)?

The following sub-hypotheses emerged from this hypothesis:

- 3-1** There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly different according to the variable "gender."
- 3-2** There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "experience".
- 3-3** There is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "type of school."
- 3-3** There is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary



school teachers in Ahmadi Governorate significantly according to the variable "training courses".

Presentation of the results of the first sub-hypothesis (3-1):

The first sub-hypothesis stated that: "There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "type", and to test this hypothesis, the researcher calculated the arithmetic averages, standard deviations and the value of the "T" test for independent samples (Independent Samples T.Test), to detect the significance of the differences Among the average scores of the participants, the results were as shown in the following table (10):

Table (10): The results of the "T" test to indicate the differences between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly different according to the variable "gender" (n = 204)

Dimension of questionnaire	Gender	number	Arithmetic Average	Standard deviation	Freedom degrs	Value of T	The value of significance	Statistical significance
The first dimension: skills related to educational objectives	Male teacher	93	20.989	3.143	202	0.649	0.517	No functional
	Female teacher	111	20.685	3.493				
The second dimension: skills related to educational content	Male teacher	93	13.312	2.038	202	1.544	0.124	No functional
	Female teacher	111	12.856	2.153				
The third dimension: skills related to educational strategies	Male Teacher	93	11.785	2.536	202	0.466	0.641	No functional
	Female Teacher	111	11.622	2.453				
The fourth dimension: skills related to educational activities	Male Teacher	93	13.796	1.632	202	0.219	0.827	No Functional
	Female Teacher	111	13.838	1.100				
The fifth dimension: skills related to educational technology	Male Teacher	93	11.484	2.701	202	0.820	0.413	No functional
	Female Teacher	111	11.180	2.580				
The sixth dimension: skills related to evaluation	Male Teacher	93	17.161	4.158	202	0.201	0.231	No Functional
	Female Teacher	111	16.459	4.158				
Total degree	Male Teacher	93	88.527	12.669	202	1.060	0.290	No functional
	Female teacher	111	86.640	12.661				

***function at level 0.05**

The results of Table No. (10) indicate the following:

- 1- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the first dimension: "skills related to educational objectives" according to the variable "gender."
- 2- There is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the second dimension: "skills related to educational content" according to the variable "gender."
- 3- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the third dimension: "skills related to educational strategies" according to the variable "gender".
- 4- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the fourth dimension: "skills related to educational activities" according to the variable "gender."
- 5- There is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of

- education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the fifth dimension: "skills associated with educational technology" according to the variable "gender."
- 6- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the sixth dimension: "skills related to evaluation" according to the variable "gender".
 - 7- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the total score according to the variable "gender."

Thus, we accept the first sub-hypothesis, which stated that "there is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "gender". The following figure (8) provides a graphical representation of these results:

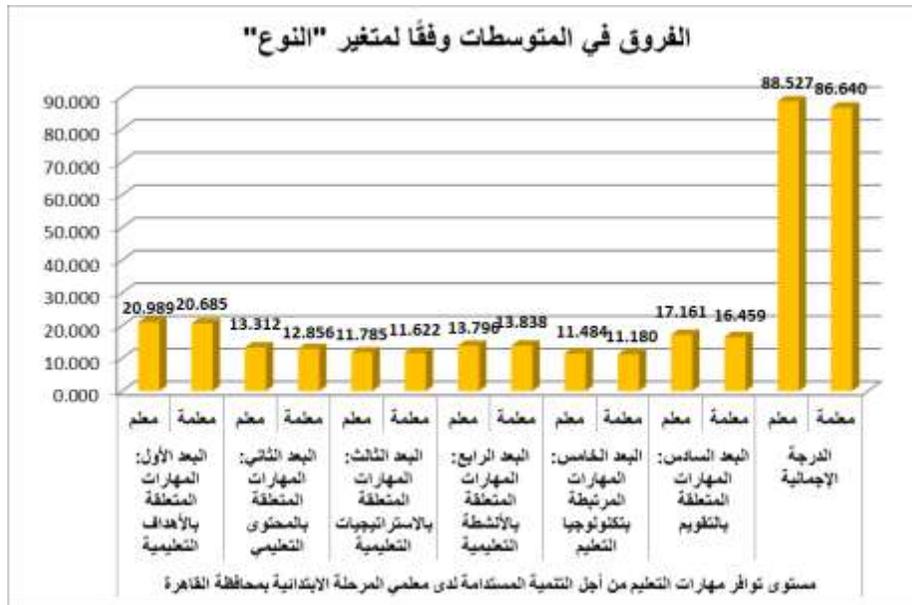


Figure (8): Differences between teachers' grades according to the variable "gender" Presentation of the results of the second hypothesis (3-2):

The second sub-hypothesis stated that: "There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "experience", and to test this hypothesis, the researcher used the methods of inferential statistics represented in the analysis of unidirectional variance, To reveal the significance of the differences between the average scores of the participants, the results were as shown in the following table:

Table (11): The results of the "One-way Analysis of Variance" test to indicate the differences between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "gender" (n = 204)

Dimensions of questionnaire	Point of contrast	Sum of squares	Freedom degree	Average of squares	The Value of "f"	The Value Of significance	Statistical significance
The first dimension: Skills related to educational objectives	Among the groups	6.722	2	3.361	0.300	0.741	Not functional
	Error (inside the groups)	2248.9	201	11.189			
	total	2255.6	203				
The second dimension: Skills related to educational content	Among the groups	3.195	2	1.598	0.357	0.700	Not functional
	Error(inside the groups)	898.98	201	4.473			
	total	902.17	203				
The third dimension: Skills related to educational strategies	Among the groups	7.851	2	3.926	0.633	0.532	Not functional
	Error(inside the groups)	1247.3	201	6.206			
	total	1255.2	203				
The fourth dimension: Skills related to educational activities	Among the groups	0.42	2	0.21	0.112	0.894	Not functional
	Errors(inside the groups)	377.87	201	1.88			
	total	378.29	203				
The fifth dimension: Sills related to educational technology	Among the groups	23.902	2	11.951	1.735	0.179	Not Functional
	Error(inside the groups)	1384.4	201	6.888			
	Total	1408.3	203				
The sixth dimension: Skills related to evaluation	Among the groups	5.177	2	2.588	0.148	0.862	Not Functional
	Errors(inside the groups)	3511.9	201	17.472			
	Total	3517.1	203				
The total Degree	Among the groups	53	2	26.5	0.164	0.849	Not Functional
	Errors(inside the groups)	32528	201	161.831			
	Total	32581	203				

***Function at the level of 0.05.**

The results of Table (11) indicate the following:

- 1- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the first dimension: "skills related to educational objectives" according to the variable "experience".
- 2- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the second dimension: "skills related to educational content" according to the variable "experience."
- 3- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Al- Ahmadi Governorate with regard to the third dimension: "skills related to educational strategies" according to the variable "experience".
- 4- There is no statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the fourth dimension: "skills related to educational activities" according to the variable "experience"
- 5- There is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the

teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate with regard to the fifth dimension: "skills associated with educational technology" according to the variable "experience".

- 6- There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Al-Ahmadi Governorate with regard to the sixth dimension: "skills related to evaluation" according to the variable "experience."
- 7- There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Al- Ahmadi Governorate with regard to the total score according to the variable "experience". Thus, we accept the second sub-hypothesis, which stated that "there is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "experience". The following figure (9) provides a graphical representation of these results:



Figure (9): Differences between teachers' scores according to the variable "experience" Presentation of the results of the third sub-hypothesis (3-3):

The third sub-hypothesis stated that: "There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "type of school", and to test this hypothesis, the researcher calculated the arithmetic averages, standard deviations and the value of the "T" test. For independent samples (Independent Samples T.Test), to reveal the significance of the differences between the average scores of the participants and the results were as shown in the following table (12):

Table (12): The results of the "T" test to indicate the differences between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "school type" n=(204)

Dimensions of questionnaire	Type of school	number	Arithmetic average	Standard Deviation	Degrees Of freedom	The value of "T"	The value of significance	Statistical significance
The first dimension: skills related to educational objectives	governmental	136	21.368	2.890	202	3.381	0.00*	indicative
	private	68	19.735	3.877				
The second dimension: Skills related to educational content	governmental	136	13.353	1.872	202	2.818	0.005*	indicative
	private	68	12.485	2.428				
The third dimension: Skills related to educational strategies	governmental	136	12.096	2.357	202	3.325	0.001*	Indicative
	private	68	10.897	2.563				
The fourth dimension: Skills related to educational activities	governmental	136	13.978	1.380	202	2.384	0.018*	indicative
	private	68	13.500	1.287				
the fifth dimension: skills related to educational technology	governmental	136	11.596	2.659	202	2.143	0.033*	Indicative
	private	68	10.765	2.510				
The sixth dimension: Skills related to evaluation	governmental	136	17.265	4.015	202	2.382	0.018*	indicative
	private	68	15.809	4.310				
The total degree	governmental	136	89.654	11.681	202	3.531	0.001*	Indicative
	private	68	83.191	13.531				

*Function at the level of 0.05.

The results of Table No. (12) indicate the following:

- 1- There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the averages of the scores of the participating teachers working in (government) and (private) schools with regard to the first dimension: "skills related to educational objectives", according to the variable "type of school", and the differences came in favor of workers in (government) schools.
- 2- There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the participating teachers working in (government) and (private) schools with regard to the second dimension: "skills related to educational content" according to the variable "type of school", and the differences came in favor of workers in (government) schools.
- 3- There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the participating teachers working in (government) and (private) schools with regard to the third dimension: "skills related to educational strategies" according to the variable "type of school", and the differences came in favor of workers in (government) schools.
- 4- There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the participating teachers working in (government) and (private) schools with regard to the fourth dimension: "skills related to educational activities" according to the variable "type of school", and the differences came in favor of workers in (government) schools.
- 5- There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the

participating teachers working in (government) and (private) schools with regard to the fifth dimension: "skills associated with educational technology" according to the variable "type of school", and the differences came in favor of workers in (government) schools.

6-There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the averages of the scores of the participating teachers working in schools (government) and schools (private) with regard to the sixth dimension: "skills related to evaluation" according to the variable "type of school", and the differences came in favor of workers in schools (government).

7-There is a statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the participating teachers working in (government) and (private) schools with regard to the total score according to the variable "type of school", and the differences came in favor of workers in (government) schools. Thus, we reject the third sub-hypothesis, which stated that "there is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate according to the variable "type of school". The following figure (10) provides a graphical representation of these results:



Figure (10): Differences between teachers' scores according to the variable "school type" Presentation of the results of the fourth sub-hypothesis (3-4): The fourth sub-hypothesis stated that: "There is no statistically significant difference at the level of significance ($\alpha \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "training courses"", and to test this hypothesis, the researcher calculated the arithmetic averages, standard deviations and the value of the test "T" for independent samples (Independent Samples T.Test), to reveal the significance of the differences between the average scores of the participants, and the results were as shown in the following table (13):

Table (13): The results of the "T" test to indicate the differences between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Al- Ahmadi Governorate significantly different according to the variable "training courses" (n = 204)

Dimensions of questionair	Training courses	Number	Arithmetic average	Standered Deviation	Degrees Of freedom	The value of "T"	The value of significance	Statistical significance
The first dimension: Skills related to educational objectives	I've had training courses	137	21.370	2.946	202	3.451	0.001*	indicative
	I haven't had training courses	67	19.700	3.794				
The second dimension: Skills related to educational content	I've had training courses	137	13.340	1.956	202	2.675	0.008*	indicative
	I haven't had training courses	67	12.510	2.305				
The third dimension: Skills related to educational strategies	I've had training courses	137	12.130	2.323	202	3.685	0.00*	Indicative
	I haven't had training courses	67	10.810	2.589				
The fourth dimension: Skills related to educational activities	I've had training courses	137	13.960	1.475	202	2.075	0.039*	indicative
	I haven't had training courses	67	13.540	1.064				
The fifth dimension: Skills related to educational technology	I've had training courses	137	11.660	2.619	202	2.662	0.008*	Indicative
	I haven't had training courses	67	10.630	2.546				
The sixth dimension: Skills related to evaluation	I've had training courses	137	17.270	3.994	202	2.437	0.016*	indicative
	I haven't had training courses	67	15.780	4.348				
The total degree	I've had training courses	137	89.720	11.823	202	3.693	0.00*	Indicative
	I haven't had training courses	67	82.960	13.205				

* Function at the level of 0.05.

The results of Table (13) indicate the following:

- 1- There is a statistically significant difference at the level of significance ($A \leq 0.05$) between the average scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the first dimension: "skills related to educational objectives", according to the variable "training courses", and the differences came in favor of those (received training courses).
- 2- There is a statistically significant difference at the level of significance ($A \leq 0.05$) between the averages of the scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the second dimension: "skills related to educational content" according to the variable "training courses", and the differences came in favor of those who (received training courses).
- 3- There is a statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the third dimension: "skills related to educational strategies" according to the variable "training courses", and the differences came in favor of those who (received training courses)
- 4- There is a statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the fourth dimension: "skills related to educational activities" according to the variable "training courses", and the differences came in favor of those who (received training courses).
- 5- There is a statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the participating teachers who (received training courses) and those

- who (did not receive training courses) with regard to the fifth dimension: "skills related to educational technology" according to the variable "training courses", and the differences came in favor of those who (received training courses).
- 6- There is a statistically significant difference at the level of significance ($A \leq 0.05$) between the averages of the scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the sixth dimension: "skills related to evaluation" according to the variable "training courses", and the differences came in favor of those who (received training courses).
- 7- There is a statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the participating teachers who (received training courses) and those who (did not receive training courses) with regard to the total score according to the variable "training courses", and the differences came in favor of those who (received training courses).

Thus, we reject the fourth sub-hypothesis, which stated that "there is no statistically significant difference at the level of significance ($a \leq 0.05$) between the average scores of the teachers participating in the study on the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate significantly according to the variable "training courses".

The following figure (11) provides a graphical representation of these results:

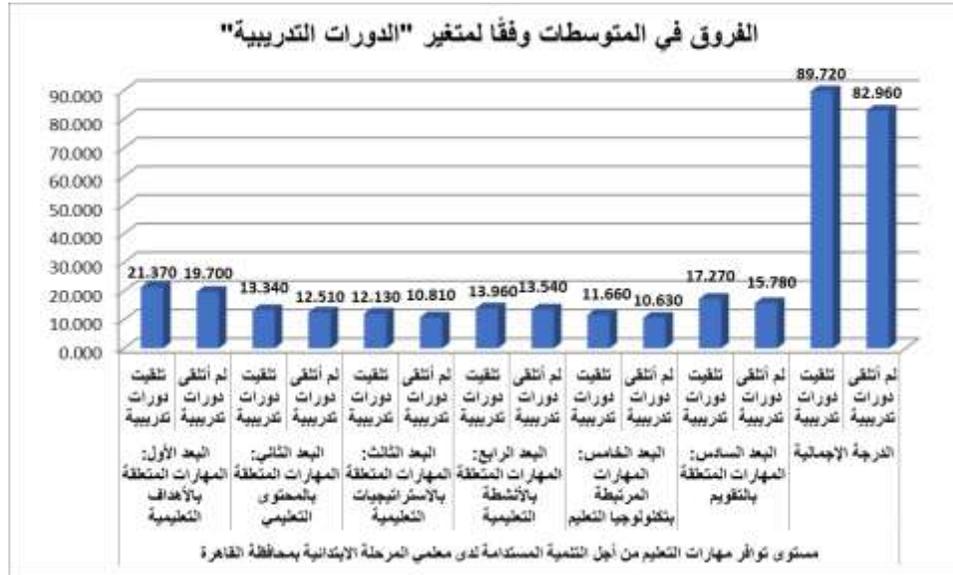


Figure (11): Differences between teachers' grades according to the variable "training courses"

Thus, the researcher has answered the third question, which reads: "Does the level of availability of education skills for sustainable development among primary school teachers in Ahmadi Governorate differ significantly according to variables: (type - experience - type of school - training courses)?".

Results of the proposed conception:

Among the most important findings of the research:

- 1- Low sustainable awareness and interest in environmental issues, whether among school administration, teachers, administrators and students.
- 2- The absence of national standards that serve as clear indicators of sustainable performance in public schools.
- 3- Poor application of sustainable knowledge in public schools.



- 4- The absence of school activities and how to activate them as an important and necessary part of the completion of teaching and learning processes.
- 5- Emphasize the importance of the Sustainable Schools Program, which is a comprehensive and participatory approach to learning for sustainability, and aims to engage students through classroom and outdoor study, as well as raise awareness of sustainable development issues.
- 6- Participate in spreading sustainable culture in schools in order to preserve natural resources.
- 7- Focus on rationalizing the environmental behavior of students so that they participate effectively in protecting the environment in which they live.
- 8- Attention to spreading sustainable awareness, and providing knowledge and skills to students, especially in the primary educational stages.
- 9- The need to establish special programs to educate students on the subject of hygiene and rationalization of the consumption of natural resources.
- 10- The importance of training teachers and school leaders on the application of sustainable activities in schools.
- 11- Taking into account the specifications of sustainable school pipes, location and health requirements.
- 12- Provide a supportive school environment for the health of students by taking into account the requirements necessary to improve the school environment.
- 13- Providing elements of environmental security and safety and the extent to which all school environment items conform to these elements.



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