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M. A. Alahmadi

College of Education, Imam Abdulrahman Bin Faisal University, P.O. Box: 2375, Dammam, Saudi Arabia,
2210500119@iau.edu.sa

M. F. Alnaim

College of Education, Imam Abdulrahman Bin Faisal University, P.O. Box: 2375, Dammam, Saudi Arabia,
2210500119@iau.edu.sa

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The Level of Awareness of Female Teachers of Students with Learning Disabilities with the Concepts of Sustainable Development and Their Application in Elementary Schools

M. A. Alahmadi* and M. F. Alnaim

College of Education, Imam Abdulrahman Bin Faisal University, P.O. Box: 2375, Dammam, Saudi Arabia

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Abstract: The current study aimed to identify the level of familiarity of teachers with learning disabilities with the concepts of sustainable development and their application in the elementary schools in the Kingdom of Saudi Arabia. Learning disabilities in the concepts of sustainable development, and the second dimension is their application of these concepts in the primary stage, and the psychometric properties of validity and stability were verified, and the study sample consisted of (100) female teachers. The results found that there were no differences in the teachers' knowledge of the concepts of sustainable development and their application in the primary stage due to the variable of experience, while it was found that there were differences due to the variable of academic qualification in favor of the higher qualification over the lower one. Generally, the total mean of the awareness and application for the age (from 1 to 5 years is 4.17) and the SD is 0.89, (from 5 to 10 years is 4.35) and the SD is 0.59, (from 10 to 15 years is 4.27) and the SD is 0.81, and (more than 15 years is 4.37) and the SD is 0.52. The study came out with some recommendations, it is necessary to strengthen and encourage female teachers to maintain a high level of awareness and application of the concepts of sustainable development in schools for elementary school.

Keywords: Sustainable Development, Teachers, Learning Disabilities, Elementary Schools.

1 Introduction

Proceeding from the vision of the Kingdom of Saudi Arabia 2030, which paid great attention to the development of services provided to disabled persons. The Kingdom has made great progress in developing education, training and rehabilitation services in the field of special education under the umbrella of sustainable development, as it has modified curricula and built platforms, in addition to electronic channels that aim to equalize people with disabilities and integrate them with ordinary people.

It is known that the teacher is the basis in the educational process, given the strategies, methods and teaching methods that he offers; therefore, it is important to know the level of teachers' knowledge with the concepts and principles of sustainable development and the level of application of these concepts and principles, whether from environmental, technical, social, and cultural aspects (McNaughton, 2012).

UNESCO places education as a key factor in achieving sustainable development. Therefore, education is not limited to the transfer of experiences and knowledge only, Rather, it goes beyond creating the educational environment to practice new roles in community management, decision-making, solving its problems, and enhancing its values and morals. The teacher is the key to the educational process and the most prominent of its influential elements in building the development system in its comprehensive concept within the educational environment (UNESCO, 2005).

What cannot be overlooked is that special education in general and the field of learning disabilities in particular, require teacher preparation and training in line with the educational needs of students; being the "backbone" in the educational-learning process, which will not succeed unless there is a teacher who is able to accurately diagnose educational problems, provide services and care for this category of students, and direct parents to the most specialized bodies in treating such problems (Mathews et al., 2022). In addition, the teachers of learning disabilities are mostly aware of the behavioral manifestations or characteristics that are associated with learning disabilities in terms of frequency, duration, and degree (Aba Hussein, 2019).

One of the sustainable development goals is to help children with learning disabilities through varying techniques,

*Corresponding author e-mail: 2210500119@iau.edu.sa

arrangements and methods, starting with remedial intervention in the ordinary classroom, and ending with the resource room. There is no doubt that these students need a wide range of educational services to meet their needs adequately within the school system (Leslie Nai, 2007). Sustainable development plays a prominent role in special education by its nature, by providing students with learning disabilities with special services that are not available to them in the regular educational program. Taking into account the nature of individual differences between some students on the extent of amplitude and diversity (Al-Waqfi, 2004).

Research problem:

The society in the twenty-first century is in dire need of a teacher who enjoys creativity, flexibility, adaptation and invention, not only that, but the educational system needs to keep pace with the times and change, because education in accordance with the aspirations of sustainable development aims to enhance the ability of learners to make informed decisions and responsible measures, that guarantees the safety of the environment and the justice of society, for the benefit of present and future generations (Mathews et al., 2022).

Here, the role of the school in the process of teacher development emerges through the development of awareness of recent developments and challenges, especially issues of sustainable development; Therefore, the teacher must realize that the teaching profession has rules and assets that require the possession of certain competencies to practice, whether they are cognitive, professional, or human, and that these competencies can be acquired, developed and applied (Leslie Nai, 2007).

And based on the urgent need to develop services provided to people with disabilities in general and learning disabilities in particular in various social, environmental, technical and cultural aspects, this category must be given a lot of attention in order to achieve the goals of sustainable development by developing the services provided to this category in terms of quantity and quality (Al-Waqfi, 2004). Identifying the level of knowledge and apply these concepts by teachers of learning disabilities ; Therefore, the problem of the current study emerged in that it seeks to answer the following main question: What is the level of awareness of female teachers with learning disabilities about the concepts of sustainable development and the applying level of it?

Questions of the Study:

This study attempts to answer the following sub-questions:

- What is the level of female teachers' awareness of students with learning disabilities about the concepts of sustainable development?
- What is the level of applying the concepts of sustainable development of the female teachers of female students with learning disabilities?
- Are there statistically significant differences at ($\alpha = 0.05$) in the level of awareness of female students' teachers with learning disabilities and their application of sustainable development concepts according to experience?
- Are there statistically significant differences at ($\alpha = 0.05$) in the level of awareness of female students' teachers with learning disabilities and their applying of sustainable development concepts according to the educational qualification?

Objectives of the study:

This study aims to identify the level of knowledge of female teachers with learning disabilities with the concepts of sustainable development and to identify the level of their applying of those principles in the educational process in primary schools in the Eastern Province of the Kingdom of Saudi Arabia.

Significant of the study:

Shedding light on the importance of identifying the principles and concepts of sustainable development that seek to bridge the gaps, in light of the development witnessed by the world, and to provide studies and research in this field, and the importance of applying the principles of sustainable development in the field of learning disabilities and striving to achieve the desired goals of developing curricula, methods, strategies, teaching methods and goals in line with the goals of sustainable development, and raising awareness of the importance of applying these principles of sustainable development in education by teachers.

2 Theoretical Framework & Literature Review:

The issue of learning disabilities is one of the relatively recent topics in the field of special education, where the interest of special education was previously focused on other forms of disabilities. Such as mental, auditory, visual, and motor disabilities, but due to the emergence of a group of normal students in their mental, sensory, and motor development,

but they suffer from educational problems, specialists in special education began paying attention to this category to identify the manifestations of learning disabilities, especially in the academic aspects (Kavale et al., 2009).

There are many and varied terms that describe the category of people with learning disabilities, and perhaps this was a result of the interest in different disciplines and the sense of their danger, as each trend or specialization explains this phenomenon from its own perspective, but the credit goes to the American psychologist Samuel Kirk 1963 in achieving the first official definition of a learning disabilities, which refers to a learning disabilities as: “a delay or disturbance in one or more of the processes of speech, language, reading, spelling, writing, or arithmetic, as a result of brain dysfunction, emotional disturbance, or Behavioral problems, with the exception of children who suffer from learning disabilities resulting from sensory deprivation, mental retardation or cultural deprivation” (AL-Lala et al., 2013).

The Kingdom of Saudi Arabia (KSA) derived a definition of learning disabilities from the definitions prevailing in America and especially the definition of the American Bureau of Education.

This definition includes the following elements: “disturbance in one or more intellectual processes, disturbance in understanding or using written or spoken language, disturbance in listening, thinking and speaking, disturbance in reading, spelling and mathematics, and other disabilities such as mental or hearing handicap, or visual, or other causes of that disturbance” (General Secretariat for Special Education, Ministry of Education, 1422 AH).

Learning disabilities Diagnostic Criteria

Since learners with learning disabilities are the largest group of students within the scope of special education, knowledge of the effectiveness of their educational interventions is still limited; Therefore, effective teaching strategies and programs must be used to help them think, make decisions, and successfully solve the problems they face (Zaki, 2008).

The category of people with learning disabilities is identified through the following criteria:

1. The criterion for the divergence between achievement and intelligence: where there is a divergence, or deviation, between the achievement level and mental ability.
2. The Exclusion Criterion: Students whose learning disabilities are due to sensory, mental, motor, or visual impairments, environmental factors, emotional or cultural disorders are excluded. This criterion is verified by the opinion of the class teacher, or specialist Psychologist, social worker, or school health visitor.
3. The test of maturity: where we find growth rates vary from one child to another, which leads to the difficulty of preparing him for the learning processes; Therefore, it is necessary to provide educational programs that correct growth deficits that impede learning processes, whether this deficiency is due to genetic, formative, or environmental factors, and then this test reflects individual differences in the ability to achieve.
4. The Special Education Criterion: It is related to the previous test to the effect that students with learning disabilities are not suitable for the teaching methods used with ordinary students, in addition to the inadequacy of the methods used with some students with disabilities, but rather a type of special education must be provided in terms of (diagnosis, classification and education). It differs from the previous categories.
5. Response to Intervention Model: It is a three-level preventive model that focuses on early and evidence-based identification, matching student needs with high-quality education and monitoring the rate of learning over time to make important educational decisions (Sun et al., 2010).

The preparation of teachers of learning disabilities in the Kingdom of Saudi Arabia

Raising the level of academic achievement of students with disabilities is a primary goal that every educational institution seeks to pursue in order to continue building qualified generations capable of carrying out their responsibilities towards society. This goal is achieved by qualifying teachers to play their full role in education. Therefore, the Learning Disabilities Program in the Kingdom of Saudi Arabia aims to prepare teachers with learning disabilities in the light of quality standards by qualifying them to prepare and implement individual educational plans, apply evidence-based practices in the field of learning disabilities, activate the foundations of parental participation, and so on (Ahmed & May, 2018).

The Sustainable development

Sustainable development played an important role in the development of the concept of learning disabilities when many terms were used before the use of the term learning disabilities to describe those children whose models of behavior and learning do not fit with the existing disability categories. It has few meanings, as one term can be used to refer to several different behaviors (Al-Waqfi, 2004).

The relationship between education and various aspects of development is governed by the principle of interaction between the various aspects of society. Education affects and is affected by various aspects of comprehensive development.

The role of education is directly evident in the development of human resources that are concerned with the processes of increasing knowledge and providing skills and capabilities to the workforce (Leslie Nai, 2007).

So, spending on education is an investment in the human being, or the so-called human capital, which seeks to form an educational system capable of developing students' creative abilities and maximizing their abilities to imagine, innovate and think away from the processes of indoctrination, memorization, and the transfer of initiative from the teacher to the learner, and from education to Learning, thus focusing on a culture of creativity without a culture of memory (Sobh, 2015).

In this context, it becomes clear to us that the relationship between education and sustainable development is inseparable as long as education prepares human cadres or human capital as required (Leslie Nai, 2007).

Hence the need to invest education outputs in the various production sectors through the use of educational technology in the education process; To achieve the requirements of sustainable development, by providing learners with practical skills according to their energies and creativity in various scientific subjects (Alomari & Khataybeh, 2021); To reach the preparation of qualified individuals who contribute to serving themselves and serving society at the same time in all areas of production, in addition to developing the competencies of teachers who play their role in the development of generations on an ongoing basis; To keep pace with sustainable development. Thus, educational technology can be linked to the requirements of sustainable development as a major economic force in society (Sobh, 2015).

Trilling and Fadel indicate that preparing a generation that faces the challenges of the twenty-first century requires great attention to the educational process with all its components, and its development in accordance with the requirements and challenges of this century (21st), which requires helping students learn and apply 21st century skills and understand the core issues associated with the challenges of this century. This was confirmed by both Ahonen & Kinnunen (2015), that students in the future need the most valuable 21st century skills in their lives, including ICT skills, work and life skills, and social and interpersonal skills.

The acquisition of students with various knowledge and skills - including the skills of the 21st century - depends on the presence of a qualified and well-prepared teacher armed with those skills to enable him to educate the generation of the current century, and this calls for attention to teacher preparation and training in light of the developments of the times. Mathews et al (2022) believe that teachers must be prepared, trained, and provided with all developments that will benefit them in developing their performance level in line with the requirements and needs of the twenty-first century.

The role of learning disabilities teachers in achieving sustainable development:

The Kingdom of Saudi Arabia is one of the countries that have given special and qualitative attention to the field of sustainable development, both human and material. It has worked for this to localize science and knowledge, and has introduced the latest qualitative programs for training and institutional, service and community professional development to enhance the professional competencies of leaders in various sectors, educators and teachers in accordance with quality and accreditation standards in local and international institutions to achieve the society's goals and aspirations in accordance with the Kingdom's future vision (2030), which included the interest in developing pride in the national identity among members of the community, instilling lofty values that develop the patriotic spirit in the student, and enhance the love of the homeland and the concept of citizenship for him, and methods of defending it and preserving its achievements and properties (Singh et al., 2022). It prepares him for the future to be able to deal with life variables with an open and enlightened mind, without drifting behind bad companions who, knowingly or unknowingly, work to tear the nation apart, undermine its land and dismantle its unity and social fabric (Ahmed, Kulaibi and Masmali, 2019).

It is known that the special education teacher is one of the most important members of the core team in learning disabilities programs, so he must be able to assume this great responsibility, and work hard and diligently in order to achieve the goals of special education and apply the concepts of sustainable development to education with a long-term impact.

Turkmen (2009) mentions that the teacher has an essential role in the process of developing education as the main axis in the school and capable of achieving educational goals in its various fields. Therefore, it has become imperative for officials to change their view of how to prepare the teacher to carry out his new responsibilities in achieving these educational goals in their various aspects. From this point of view, the process of preparing the teacher has a special place in the eyes of officials as one of the priorities for the development of education in the countries of the world.

The Special Education Regulatory Manual (1436-1437) also stipulated the role of the general education teacher in

special education programs, including the following: designing teaching for subjects and courses in the school, applying modern teaching strategies, activating and applying the student's book, the student's activity book in the subject and tools of other curriculum, follow-up and correction of students' class work and homework, provide feedback to them, cooperate with educational supervisors and positively deal with what they recommend and what they offer from experiences and expertise.

Al-Mutairi and Al-Ashmawi (2021) study explored the role of sustainable development in supporting the educational process for students with disabilities from the point of view of special education teachers and female students in the light of some variables. The study sample consisted of (42) female teachers and (35) female teacher students'. "The Role of Sustainable Development in Overcoming Learning disabilities " scale prepared by Sobh (2015) was used, and it consisted of (40) items distributed over four domains. The results of the study showed that sustainable development has a major role in supporting the educational process of students with disabilities from teachers point of view, and that it has a very big role in supporting the educational process of these students from female teachers' point of view.

The results also showed that there were no statistically significant differences in the responses of special education teachers due to the years of experience, the age of the teacher, and the educational qualification. While there are statistically significant differences in the responses of female students due to the specialization in favor of the intellectual disability specialization. There are also statistically significant differences between the opinions of female teachers and female students in favor of female students. The two researchers also recommended holding periodic meetings between special education female teachers and sustainable development experts in order to obtain consultations and training.

Albakry's study (2016) dealt with the facilities and environmental adaptations for people with disabilities in the Arab world between reality and expectations, as it tried to shed light on the importance of facilities to achieve the requirements of sustainable development for them, and their rights to participate in all activities of society, the paper was based on the foundations, principles and standards that must be available in environmental facilities and adaptations as one of the contemporary trends to qualify people with disabilities for community participation in the 21st century. The paper relied on the case study approach to collect and analyze data through the researchers' vision and analysis of the reality and requirements of facilities and environmental adaptations for people with disabilities in the Arab world at the present time, as well as their vision to develop mechanisms and specifications for those facilities and adaptations in a humane, social and ethical manner in line with the needs of the disabled in light of complex and intertwined societies and in a manner that meets their aspirations and the aspirations of their Arab societies in qualifying them in a way that enables them to keep pace with developed countries and preserve their cultural identity at the same time.

Al-Jadali study (2018) aimed to identify the role of including the concepts of sustainable development in teaching in supporting people with learning disabilities from the point of view of teachers in government schools affiliated with the Ministry of Education in Riyadh Governorate. The study sample consisted of (33) male and female teachers, and to measure the role of sustainable development in overcoming learning disabilities, a tool prepared by the researcher was used. It consisted of (40) statements, which were divided into four areas: the technical field, the social field, the educational field, and the teacher hand tools field. The results of the study showed that the level of awareness of teachers of students with learning disabilities about the role of sustainable development in overcoming learning disabilities in general in all areas was very high (80.55%), and that the level of awareness of the teacher in the educational field and as a tool in the hands of the teacher was very high; Where their percentages were (85.58%) and (82.55%), while the technical and social fields achieved a high level, and the results indicated that there were no statistically significant differences due to gender or educational qualification.

The Orim study (2017), examined strategies to achieve sustainable development goals for people with disabilities among the Southern region of Nigeria, and a sample of (102) participants was selected with the aim of identifying the main actors in the sustainable development goals such as the Ministry of Education, members of the National Assembly and representatives of the House of Representatives, etc. A questionnaire consisting of twenty items was developed that measures the classification of the effectiveness of the strategies used by the establishment of the National Committee for Sustainable Development for People with disabilities and the follow-up of the process of data disaggregated by disability in order to know the link between these strategies in achieving sustainable and inclusive education. The results of the study concluded that these strategies are effective and is highly relevant in achieving inclusive sustainable education and has recommended that the government should establish viable follow-up mechanisms at the federal level in order to monitor, assess and hold national actors accountable for achieving the SDGs.

Sobh's study (2015) aimed to identify the role of sustainable development in overcoming learning disabilities from the point of view of teachers in government schools affiliated with the Ministry of Education in the governorates of Jerash, Amman and Irbid, in addition to identifying the differences in their level of awareness and application according to the variables of educational qualification and gender. The study sample consisted of (33) male and female teachers, and to

measure the role of sustainable development in overcoming learning disabilities, a tool that was prepared by the researcher was used. The results of the study showed that the awareness level of teachers of students with learning disabilities about the role of sustainable development in overcoming learning disabilities in general on all areas was very high, and that teacher awareness level in the educational field and as a tool in the hands of the teacher was very high, while the technical and social field achieved a high level, and the results indicated that there were no statistically significant differences due to gender or educational qualification.

3 Methodology

This study follows the descriptive analytical approach due to the nature of the current study and its variables.

Population of the study

The study population consisted of all (156) female teachers with learning disabilities in the Eastern Province of the Kingdom of Saudi Arabia.

Sample of the study

The research sample was selected by convenient sample method by distributing the link to all teachers of learning disabilities among primary stage in the Eastern Province. A sample of (100) female teachers responded on the questionnaire. Table (1) shows the distribution of the study sample according to experience and educational qualification:

Table 1: Distribution of the study sample according to experience and educational qualification

Sample of the study	Variable	Female teachers no.	Female teachers %
Experience	1 to 5 years	34	34.0%
	5 to 10 years	26	26.0%
	10 to 15 years	27	27.0%
	More than 15 years	13	13.0%
Qualification	Diploma	3	3.0%
	Bachelor	79	79.0%
	higher education	18	18.0%

The previous table shows the distribution of the study sample on the two main study variables.

Study tool:

In order to achieve the objectives of this study, a questionnaire was prepared to identify the level of knowledge of teachers with learning disabilities with the concepts of sustainable development and their application in the primary stage in the Eastern Province. In order to verify the suitability of the questionnaire to the study environment and its objectives, the psychometric properties of the questionnaire were verified as follows:

Corrected Validity:

The researchers was distributed the questionnaire to nine experts in the field of special education, and Appendix B shows their names, and they were asked to show their opinion on the statements in terms of belonging to the fields, the clarity of the statements, the accuracy of the linguistic formulation, and the suitability of the questionnaire to achieve the objectives of the study.

The expert's comments were made use of by applying the notes that were agreed upon by approximately (6 out of 9), whether by deletion, addition or modification. Based on the opinions of the experts, amendments were made and (10) statements were deleted, as the number of statements of the questionnaire became (33).

Internal consistency validity:

The correlation coefficients between the performance of the sample on each statement of the questionnaire related to awareness of the concepts of sustainable development and its application with the total score, through applying the tool on the individuals of the exploratory sample, which numbered (30) teachers from outside the main study sample and from within the population.

Table (2) shows the correlation coefficients of each statement with the dimension and the statement with the total score as follows:

Table 2: Correlation coefficients of the statements of a questionnaire for the knowledge of teachers of learning disabilities with the concepts of sustainable development and their application of them in the statement with the dimension and the total score

No.	Dimension correlation coefficient	Correlation coefficient with the total score	No.	Dimension Correlation coefficient	Correlation coefficient with the total score
Awareness of teachers with learning disabilities about the concepts of sustainable development			The application of learning disabilities teachers to the concepts of sustainable development		
1	0.45*	0.41*	16	0.64**	0.60**
2	0.51**	0.42*	17	0.71**	0.70**
3	0.58**	0.47*	18	0.70**	0.68**
4	0.56**	0.46*	19	0.78**	0.55**
5	0.64**	0.55**	20	0.48*	0.43*
6	0.60**	0.58**	21	0.64**	0.60**
7	0.47*	0.40*	22	0.60**	0.58**
8	0.41*	0.38*	23	0.47*	0.41*
9	0.67**	0.58**	24	0.55**	0.50**
10	0.66**	0.52**	25	0.50**	0.47*
11	0.62**	0.54**	26	0.69**	0.62**
12	0.60**	0.50**	27	0.60**	0.53**
13	0.68**	0.53**	28	0.62**	0.58**
14	0.47*	0.40*	29	0.68**	0.60**
15	0.41*	0.38*	30	0.63**	0.61**
			31	0.68**	0.62**
			32	0.55**	0.50**
			33	0.50**	0.47*
Correlation of the dimension with the total score		0.68**	Correlation of the dimension with the total score		0.70**

** Significance at ($\alpha = 0.05$). * Significance at ($\alpha = 0.01$).

Table (2) showed that there is a correlation between the degree of each statement of the questionnaire about the parameters' knowledge with the concepts of sustainable development with the dimension. The correlation coefficients between the statement and the dimension ranged between (0.41) and (0.78), and the correlation coefficients of the statements with the total score ranged between (0.38) and (0.70), which are suitable values for the purposes of the current study. The first dimension with the total score reached (0.68), while the second dimension reached with the total score (0.70).

Reliability:

The reliability of questionnaire was confirmed by the Cronbach Alpha method to calculate the reliability values on the pilot study sample. Table (3) shows the results:

Table 3: Cronbach's alpha coefficients values to determine the knowledge of learning disabilities parameters with the concepts of sustainable development

Dimension	Cronbach's alpha
First	0.78
Second	0.80
Total score	0.81

Table (3) showed that the reliability coefficients were appropriate; it was found that this value was suitable for this type of educational studies, and therefore the questionnaire was used and relied upon due to the appropriateness of its statements for the current study.

The method of correcting and explaining a questionnaire for the knowledge of teachers of learning disabilities with the concepts of sustainable development:

The answer to the questionnaire was according to the five-likert scale model, where the scores are calculated according to the type of statement. The statements are calculated as follows: never (1), rarely (2), sometimes (3), often (4), always (5).

All the statements have a positive direction, and the total score of the female teacher on the questionnaire is calculated by adding the marks it gets. The marks obtained by the female teacher ranged between (33-165). In theory, the average score obtained by the female teacher on the questionnaire is calculated according to the following equation:

$$\text{Range} = \text{highest score} - \text{lowest score} (5-1) = (4)$$

$$\text{Category length} = \text{range} / \text{number of categories} (4/3) = (1,33)$$

The class length will be as follows:

- From 1 to 2.33 reflects the level of female teachers' knowledge with the concepts of sustainable development in terms of awareness and application to a weak degree.
- From 2.34 to 3.67 reflects the level of knowledge of the female teachers about the concepts of sustainable development in terms of awareness and application to a medium degree.

From 3.68 to 5 reflects the level of female teachers' knowledge with the concepts of sustainable development in terms of awareness and application in high degree.

4 Results & Discussions

First question results: What is the level of awareness of female teachers with learning disabilities about the concepts of sustainable development?

To answer this question, Mean and standard deviations were calculated. Table (4) shows the results for the level of awareness of female teachers with learning disabilities about the concepts of sustainable development:

Table 4: Mean and standard deviations to determine the level of awareness of female teachers with learning disabilities about the concepts of sustainable development

No.	Statement	Mean	SD	Level	order
The first dimension: Awareness of female teachers with learning disabilities about the concepts of sustainable development in the primary stage					
11	I imagine that making the student with learning disabilities aware of his importance in society increases his enthusiasm for learning.	4.54	0.91	High	1
9	I am aware of the ethical and professional standards that guide my work when teaching students with learning disabilities.	4.53	0.89	High	2
8	I see the importance of the evaluation being a continuous and regular process so that it is not limited to the final evaluation.	4.51	0.88	High	3
4	I am aware of the fairness of education that takes into account the discrepancy between students with learning disabilities and normal students.	4.48	0.90	high	4
14	I help students with learning disabilities to participate positively and generalize what has been learned in new situations.	4.47	0.87	high	5
10	I see the importance of teamwork for students with learning disabilities.	4.46	0.87	high	6
12	I realize that technology contributes to developing the ability of students with learning disabilities to learn better.	4.45	0.94	high	7
5	I motivate students with learning disabilities through my knowledge of teaching strategies that contribute to achieving learning outcomes.	4.43	1.01	high	8
7	I am aware of the importance of self-evaluation for students with learning disabilities.	4.41	0.96	high	9
6	I make sure that the individual educational plan is able to	4.40	0.93	high	10

No.	Statement	Mean	SD	Level	order
	develop self-learning skills for students with learning disabilities.				
13	I achieve the desired goals of using technology in the process of teaching students with learning disabilities as a requirement for sustainable development.	4.26	0.93	high	11
2	I make the educational plan appropriate to the needs of students with learning disabilities in the long run.	4.24	1.06	high	12
15	I am aware of the obstacles associated with learning disabilities through the concepts of sustainable development, such as the difficulty of following up on performance and the scarcity of the applied aspect.	4.19	1.06	high	13
3	I was briefed on the importance of the concepts of sustainable development to develop the process of teaching students with learning disabilities.	3.65	1.24	Mid.	14
1	I more Familiar with educational quality standards that contribute to providing sustainable education for students with learning disabilities.	3.62	1.14	Mid.	15
	Total	4.31	0.77	High	

Table (4) showed that the level of Awareness of female teachers with learning disabilities about the concepts of sustainable development was of a high level, with a mean of (4.31) and a standard deviation of (0.77), and the statements ranged between a high and medium level.

So the first question that the level of awareness of the female teachers about the concepts of sustainable development were of a high level,

as all the statements were at a high level except for two statements that obtained an medium level, and the highest statements in awareness of the concepts of sustainable development was of a high level, statement (11) ranked first with a high level: " I imagine that making the student with learning disabilities aware of his importance in society increases his enthusiasm for learning." This may be attributed to the fact that when the student is more interested and cared for, and makes him feel that he is an important person from others, he works to raise his self-value and encourage and motivate him to make great efforts to achieve his goals and achieve excellence in his learning.

Statement (9) ranked second with high level, which stipulated: “I am aware of the ethical and professional standards that guide my work when teaching students with learning disabilities”

This may be due to the importance of the teacher's knowledge of professional and ethical standards, knowledge of and adherence to them while performing his work. Because it represents the main directions of his profession, and helps him to achieving his goals, and prevents him from abuses and mistakes that he may fall into. Standards guide the teacher's best practices and interactions with the school community, and they are prerequisites for controlling the teacher's behavior and practices while working in the school (Mathews et al., 2022).

Statement (8) ranked third, which stipulated: "I see the importance of the evaluation being a continuous and regular process so that it is not limited to the final evaluation”

This may be due to the teachers’ awareness of the importance of the evaluation process in achieving the goals of the teaching process through its use throughout the teaching period during the learning process through the use of various tools from the beginning of teaching to its end; Given the importance of this in improving students' learning and providing them with continuous feedback to correct their performance, it also helps the teacher to improve her teaching performance based on the results of continuous evaluation (Mathews et al., 2022).

While the lowest statements on awareness of sustainable development concepts for female teachers were as follows:

Before the last, statement (3) came with medium level, which stipulated: “I was briefed on the importance of the concepts of sustainable development to develop the process of teaching students with learning disabilities.” This may be due to the weak interest of female teachers in continuous self-education through accessing the latest knowledge related to this field via the Internet or training, and may also be due to the weak training courses received by female teachers in the field of sustainable development or the lack of courses offered related to education for sustainable development (Al-Waqfi, 2004).

Statement (1) ranked last with medium level, which stipulated: “I more Familiar with educational quality standards that contribute to providing sustainable education for students with learning disabilities.”

This may be attributed to the lack of provision of courses and training programs for teachers with learning disabilities that provide them with professional and specialized standards and how to practice them in the educational field, which contributes to developing their teaching skills to achieve and practice sustainable development concepts while teaching their students (Çopur, 2019).

This result is agreed with Sobh's study (2015), which showed that the level of awareness of teachers of students with learning disabilities about the role of sustainable development in overcoming learning disabilities in general on all dimensions was of very high level, and that the level of teacher awareness of the educational field and as a tool in the hands of the teacher was very high, while The technical and social field has attained a high level. The researcher attributes the current result to the fact that teachers of learning disabilities in the eastern region receive appropriate training that helps them to be aware of the concepts of sustainable development and know the importance of this in order to develop the educational process for students with disabilities and make it have a long-term lasting impact.

The results of the second question: What is the level of application of the concepts of sustainable development by female teachers with learning disabilities?

To answer this question, Mean and standard deviations were calculated, and Table (5) shows the results for the level of application of the concepts of sustainable development by female teachers with learning disabilities:

Table 5: Mean and Standard Deviations to know the level of application of the concepts of sustainable development by female teachers with learning disabilities

No.	Statement	Mean	SD	Level	order
The second dimension: the application of learning disabilities teachers to the concepts of sustainable development in primary schools					
5	I seek to establish the principles of inclusion in a positive way.	4.66	0.61	high	1
18	I seek for the family of a student with learning disabilities to have all information related to the diagnosis and services available to their children.	4.41	1.01	high	2
1	I seek through sustainable development to improve communication between students with learning disabilities and the teacher.	4.37	0.93	high	3
11	I provide equal opportunities for students with learning disabilities to help them adopt new ideas to bring about positive change in society.	4.34	0.95	high	4
16	Through the individual educational plan, I develop fluency, originality and flexibility among students with learning disabilities.	4.31	0.89	high	5
17	Students with learning disabilities are taught critical thinking skills.	4.31	1.05	high	6
8	I work on linking teaching skills with different areas of life to facilitate their use by students with learning disabilities.	4.30	0.99	high	7
7	I seek to develop decision-making and problem-solving skills for students with learning disabilities	4.28	1.07	high	8
14	With students with learning disabilities, I use structured and self-directed instruction.	4.28	1.05	high	9
6	I encourage students with learning disabilities to use the self-monitoring method.	4.24	1.09	high	10
9	I introduce new educational methods that take into account individual differences.	4.21	1.01	high	11
10	I am working on preparing new technological strategies that focus on developing students with learning disabilities.	4.21	0.94	high	12
15	I practice social activities that take into account the characteristics of students with learning disabilities	4.19	0.95	high	13
13	Train students with learning disabilities to collect and analyse data related to community problems.	4.16	1.20	high	14
3	I am keen on continuing education to reach personal and professional growth by attending training courses and workshops.	4.08	1.11	high	15
2	I implement plans to serve the local community and develop	3.96	1.13	high	16

No.	Statement	Mean	SD	Level	order
	the environment.				
4	I offer educational and guidance programs for parents of students with learning disabilities.	3.94	1.22	high	17
12	Build activities related to sustainable development issues for students with learning disabilities.	3.94	1.21	high	18
	The second dimension	4.23	0.80	high	

Table (5) showed that the level of application of parameters in the concepts of sustainable development was of a high level, with a mean of (4.23) and a standard deviation of (0.80), and the all statements were of a high degree.

And the results of the second question showed that the level of the application of the concepts of sustainable development was of a high level,

the researcher attributes the current result to the fact that the teaches have sufficient awareness of the concepts of sustainable development, therefore, they are ready to apply these concepts while teaching students with learning disabilities; due to its positive impact on the level of students and its help in developing and updating appropriate teaching strategies for students with learning disabilities (Al-Waqfi, 2004).

The highest statements in applying the concepts of sustainable development were as follows: statement (5) ranked with a high level which stipulated: " I seek to establish the principles of inclusion in a positive way", the researcher attributes this result to the teachers' knowledge with the methods of integration and their awareness of its importance in achieving the goals of the educational process and providing their students with knowledge and skills easily (Sobh, 2015).

Statement (18) ranked second with a high level, statement which states: "I seek for the family of a student with learning disabilities to have all information related to the diagnosis and services available to their children".

This result may be attributed to the importance of involving the student’s family in the educational process by providing them with all procedures and information in order for the family to help prepare the individual educational plan and implement it successfully, because of its great role in the education and care of children (Anderson & Minke, 2007).

Statement (1) ranked third with high level, which stipulated: " I seek through sustainable development to improve communication between students with learning disabilities and the teacher ".

This result may be attributed to the importance of the process of effective communication and communication between the parties to the educational process, and in particular between the student and his teachers, to achieve the learning goals effectively (Anderson & Minke, 2007).

While the lowest statements related to the level of application of the concepts of sustainable development among female teachers were as follows:

Statement (4) came before the last with high level, which stipulated “I offer educational and guidance programs for parents of students with learning disabilities.”.

This result may be attributed to the teachers’ awareness of the role of parents in the success of the educational process and accelerating the progress of the student, especially those with learning disabilities.

Statement (12) ranked last, which stipulated, "Build activities related to sustainable development issues for students with learning disabilities ".

This result may be attributed to female teachers possessing various teaching skills, including the skills of preparing educational activities related to the concepts of sustainable development and presenting them to students as a result of their interest and awareness of the importance of that (Cross, 1998).

The results of the third question: Are there statistically significant differences at ($\alpha = 0.05$) in the level of awareness of female teachers of students with learning disabilities and their application of sustainable development concepts according to the experience variable?

To examine the statistically significant differences in the level of awareness and application of the concepts of sustainable development by female students with learning disabilities according to the experience, Mean and standard deviations were calculated to determine the teachers’ knowledge with the concepts of sustainable development according to experience, and Table No. (6) shows that:

Table 6: Mean and Standard Deviations (SD) to determine the knowledge of female teachers with learning disabilities about awareness and application of the concepts of sustainable development due to the experience

Questionnaire	Experiences Categories	No.	Mean	SD
1 st dimension: awareness	From 1 to 5 years	34	4.23	0.89
	From 5 to 10 years	26	4.42	0.53
	From 10 to 15 years	27	4.20	0.90
	More than 15 years	13	4.52	0.46
2 nd dimension: the application	From 1 to 5 years	34	4.12	0.96
	From 5 to 10 years	26	4.28	0.68
	From 10 to 15 years	27	4.33	0.79
	More than 15 years	13	4.25	0.63
Total of awareness and application	From 1 to 5 years	34	4.17	0.89
	From 5 to 10 years	26	4.35	0.59
	From 10 to 15 years	27	4.27	0.81
	More than 15 years	13	4.37	0.52

The results showed that there are apparent differences between means values of *the knowledge of female teachers with learning disabilities about awareness and application of the concepts of sustainable development due to the experience*, and to show the statistically significant differences; One-Way ANOVA test was used, and table No. (7) show that:

Table 7: One-Way ANOVA test to show the statistically significant differences in the level of the parameters of learning disabilities with awareness and application of the concepts of sustainable development due to the experience

	Source	Sum of squares	DF	Mean square	F	Sig.
1 st . dimension	Between groups	1.48	3	0.49	0.83	0.48
	Within the group	56.88	96	0.59		
	Total	58.36	99			
2 nd dimension	Between groups	0.76	3	0.25	0.39	0.76
	Within the group	63.02	96	0.66		
	Total	63.78	99			
Total	Between groups	0.65	3	0.22	0.38	0.77
	Within the group	54.85	96	0.57		
	Total	55.49	99			

The results of One-Way ANOVA analysis, table No. (7) showed that there were no statistically significant differences between means values in the total degree of knowledge of the parameters of learning disabilities with awareness and application of the concepts of sustainable development due to experience, where (F) value = (0.38), and there were no statistically significant differences between means values in the two dimensions awareness and application of the concepts of sustainable development due to experience, where (F) values = (0.83, 0.37) respectively, and these values not significant at ($\alpha = 0.05$).

The results showed that there were no statistically significant differences between means values in the total degree of teacher's knowledge of learning disabilities with awareness and application of sustainable development concepts due to experience.

The researcher attributed this result to the level of awareness and application of the concepts of sustainable development does not differ according to the experience of the learning disabilities teacher, and that there are other factors that may play a greater role in influencing the awareness and application of sustainable development concepts for teachers of learning disabilities, the female teachers, whether they are of high, medium or low experience, have motivation, desire and will for knowledge and awareness of the concepts of sustainable development on the one hand, and then applying them on the other hand. Training courses seem to play a greater role in raising awareness and application more precisely than the teacher's experience. The result of the current question is consistent with the result of the study of Al-Mutairi and Al-Ashmawi (2021), which indicated that there are no statistically significant differences in the responses of special education teachers due to the variable years of experience.

The results of the fourth question: Are there statistically significant differences at ($\alpha = 0.05$) in the level of awareness of female teachers of students with learning disabilities and their application of sustainable development concepts according to the educational qualification?

To examine the differences in the level of awareness and application of the concepts of sustainable development for female students with learning disabilities according to the teacher's academic qualification, means and standard

deviations were calculated to determine the parameters' knowledge with the concepts of sustainable development according to the scientific qualification, as shown on Table (8):

Table 8: Mean and Standard Deviations SD to determine the knowledge of female teachers with learning disabilities about awareness and application of the concepts of sustainable development due to the academic qualification

	Variables	No.	Mean	SD
1 st dimension: awareness	Higher Diploma	3	3.80	0.42
	BA	79	4.38	0.72
	Postgraduate	18	4.09	0.97
2 nd dimension: the application	Higher Diploma	3	4.43	0.76
	BA	79	4.35	0.69
	Postgraduate	18	3.69	1.06
Total degree of awareness and application	Higher Diploma	3	4.14	0.55
	BA	79	4.36	0.67
	Postgraduate	18	3.87	0.98

The results showed that there are apparent differences between means values of *the knowledge of female teachers with learning disabilities about awareness and application of the concepts of sustainable development due to the academic qualification*, and to show the statistically significant differences; One-Way ANOVA test was used, and table No. (9) show that:

Table 9: One-Way ANOVA test to show the statistically significant differences in the level of the parameters of learning disabilities with awareness and application of the concepts of sustainable development due to the academic qualification

	Source	Sum of squares	DF	Mean square	F	Sig.
1 st dimension	Between groups	1.99	3	0.99	1.72	0.19
	Within groups	56.36	96	0.58		
	Total	58.36	99			
2 nd dimension	Between groups	6.45	3	3.23	5.46	0.01*
	Within groups	57.32	96	0.59		
	Total	63.78	99			
Total	Between groups	3.55	3	1.77	3.31	0.04*
	Within groups	51.95	96	0.54		
	Total	55.49	99			

*: Significant at level of (0.05)

The results showed that there were no statistically significant differences between means values in the total degree of knowledge of the parameters of learning disabilities with awareness of the concepts of sustainable development due to the scientific qualification in the first dimension, (F) value = (1.72) and its not significant at level of (0.05).

The results showed that there were statistically significant differences between means values in the second dimension and the total degree, which is the application of the concepts of sustainable development due to the scientific qualification, (F) values = (5.46, 3.31), respectively, and these values significant at the level of ($\alpha = 0.05$).

Sheffe test was used to show the source of the means differences as shown in table (10).

Table 10: (Scheffe) test for Post Hock multiple comparison

Dimension	Education level	BSC.		Higher education	
		Mean square	Sig.	Mean square	Sig.
2nd dimension	Diploma	0.08	0.99	0.73	0.31
	BSc	-	-	*0.66	0.01
Total	Diploma	-0.22	0.88	0.27	0.84
	BSc	-	-	*0.49	0.04

* significant at level of ($\alpha = 0.05$).

Table (10) showed that there are statistically significant differences between the parameters in the knowledge of sustainable development concepts that are attributed to the qualification as follows:

- In the dimension of application of the concepts of sustainable development between the level of academic qualifications, bachelor's and postgraduate studies, the variance was in favor of postgraduate studies.
- In the total degree of the concepts of sustainable development between the level of academic qualifications,

bachelor's and postgraduate studies, the variance was in favor of postgraduate studies.

The results of the current question showed that there were no statistically significant differences between means values in the total degree of knowledge of the teachers of learning disabilities with the concepts of sustainable development due to the scientific qualification in the first dimension, which led to the acceptance of the first hypothesis which states: There are no statistically significant differences in the awareness of the female teachers at the level of significance ($\alpha = 0.05$) attributed to the educational qualification. The result of the question is agreed with the study result of Al-Mutairi and Al-Ashmawi (2021), which indicated that there are no statistically significant differences in the responses of special education teachers due to the educational qualification.

The results of the current question also showed that there are statistically significant differences between the parameters in the knowledge of the concepts of sustainable development due to the scientific qualification, as there were statistically significant differences in the dimension of application of the concepts of sustainable development between the levels of the scientific qualification in favor of graduate studies, and the researcher attributed this to the fact that the parameters of learning disabilities Females with higher educational qualifications have the ability to apply sustainable development concepts in education to a greater degree than female teachers with lower educational qualifications; As the postgraduate programs enrich their knowledge and improve the quality of their teaching skills, they may also obtain scientific experiences and dialogue sessions at the university on sustainable development that helped them gain higher awareness and practical application of the concepts of sustainable development compared with teachers with lower educational qualifications (Lozano, 2010).

Recommendations

Conduct joint training programs for teachers of female students with learning disabilities in topics related to sustainable development in the field of disability and provide them with ways to apply these concepts in the educational process and periodic follow-up by the concerned authorities for the performance of teachers with learning disabilities and know the level of their application of the concepts of sustainable development accurately. Also activating partnerships and cooperation between schools and community institutions to establish and successfully implement sustainable development concepts.

Study limitations:

The small size of the study sample, and the difficulty of accessing all the items of the study sample in the time available to carry out the study.

Conflict of interest

The authors declare that there is no conflict regarding the publication of this paper.

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