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The Degree to Which Biology Teachers Use Modern Teaching Strategies from Their Point of View in Al Muwaqqar Education

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Abstract
This study aims at identify the current study aimed to reveal the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar, Jordan. The study used the descriptive survey method, and to achieve this, the researcher designed a questionnaire consisting of (30) items, Divided into four areas. It was applied to the study sample, which was about the entire study community and consisted of (30) male and female teachers studying biology. The results indicated that the degree of biology teachers' use of modern teaching strategies from their point of view in Al Muwaqqar education in the field of project learning, the field of inquiry strategy, and the field of differentiated learning, came to a medium degree, while it came in the field of learning in the discussion at a weak degree. The results also showed that there were no statistically significant differences in the degree of biology teachers' use of modern teaching strategies from their point of view in Al Muwaqqar education due to the variables of gender and educational qualification.
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INTRODUCTION

The rapid cognitive development and the openness of knowledge to information led to the emergence of challenges in the teaching-learning process, as the usual teaching strategies need to be developed and changed to match the future skills that students need in education. Therefore, the teaching-learning process has to activate, revitalize and introduce modern techniques, strategies and methods in education. Follow it and apply it to the educational situation to lead to the achievement of the desired goals.

The development of teaching strategies is an important necessity, to reach the various desired educational outcomes, and to overcome the individualism that permeates the existing educational situation through the usual learning strategies, which are characterized by memorization and indoctrination, and directing the student's energy and abilities to participate in the educational process effectively (Al-Rifai, 2012).

Employing modern teaching strategies in educational situations in the classroom is one of the modern roles of the teacher, as he works on directing and guiding the positive role of students, in order to change the student's role towards positive learning, and in order for the student's learning to occur, transforming him from a recipient and listener into an active and active student. He is aware, is able to solve problems and is actively involved in the educational process.The development of teaching strategies is an important necessity, to reach the various desired educational outcomes, and to overcome the individualism that permeates the existing educational situation through the usual learning strategies, which are characterized by memorization and indoctrination, and directing the student's energy and abilities to participate in the educational process effectively (Al-Rifai, 2012).

The choice of science teachers, especially biology teachers, for teaching strategies has a significant impact on the development of students' scientific thinking. Student development and the educational process is just a narration of what is in the textbooks (Mazen, 2007).The use of methods based on inquiry, asking questions, discussion, expression and positive interaction between students and their teachers allows organizing their thoughts and arranging them in a logical order and provides them with the opportunity to practice mental operations from observation, classification, interpretation and generation of ideas; Also, teachers value students' ideas and accept them, enabling them to express their ideas and beliefs without hesitation, as well as a deep understanding of facts, knowledge and information, and the use of thinking to transform the acquisition of knowledge into a mental activity that leads to better mastery (Al-Jaghoub, 2012).From the above, it can be considered that the use of modern and different teaching strategies in learning has increased significantly because of its importance in education and the advancement of the educational process and it's upgrading in order to achieve correct outcomes, and achieve effective educational results.

THE STUDY PROBLEM:

Teaching needs to develop appropriate teaching strategies, which are necessary and important for the success of the education process and the achievement of the desired goals, by working to exploit the positive trends of teachers towards modern teaching strategies through training and rehabilitation workshops, their importance and effective role in improving the educational process, and allocating time Sufficient and space to apply modern teaching strategies in teaching, and to provide appropriate means to activate the strategies and urge to activate

their use within the educational institution, and through the researcher's work as a biology teacher and her diagnosis of what students suffer from the difficulty of understanding biology and its rigidity and the lack of teachers' interest in activating appropriate strategies in teaching, and after Introducing the researcher to the theoretical literature related to teaching strategies, and their importance in the teaching process, The study sought to know the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar of education.

STUDY OBJECTIVE AND QUESTIONS:

The study aimed to know the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar education, by answering the following questions:

1. The first question: What is the degree to which biology teachers use modern teaching strategies from their point of view inAl Muwaqqar education?
2. Are there statistically significant differences at the significance level ($\alpha = 0.05$) between the responses of the sample members towards the degree of biology teachers' use of modern teaching strategies from their point of view in the education of the honorable brigade due to the gender variable and the educational qualification variable?

THE IMPORTANCE OF STUDY:

The theoretical and scientific importance was represented, as its practical importance is to help biology teachers to use modern teaching strategies, in order to increase the effectiveness of teaching, and workers in the Ministry of Education in Jordan may benefit from it by providing a clear vision to include the biology curriculum with modern strategies and teaching methods, in terms of Changing the roles of the teacher and the student in the teaching-learning process. The theoretical importance of this study is highlighted in that it may contribute to providing a vision for later studies in this educational literature and to supplement Arab and local libraries.

THE LIMITS OF THE STUDY:

HUMAN LIMITS: This study was applied to biology teachers in secondary and basic schools inAl Muwaqqar education.

SPATIAL LIMITS: The study was applied in secondary and basic schools inAl Muwaqqar education.

TEMPORAL LIMITS: applied in the school year 2021/2022.

STUDY LIMITATIONS:

The generalization of the results of the current study was determined by the validity and reliability of the study tool, and the response of the study sample to the paragraphs of the questionnaire prepared for that.

TERMINOLOGY OF STUDY:

Modern Teaching Strategies: It is a coordinated and sequential set of procedures or activities that are selected, in sequence, using the available capabilities, and works to guide the teacher to choose the appropriate method that determines the optimal teaching method. "The educational situation in the classroom organized by the teacher (Al-Adwan, 2016, 28)

It is defined procedurally: it is a set of strategies that biology teachers use and follow during the educational situation, in order to have an active interaction between students and teachers on the one hand, and between students themselves on the other hand, in order to achieve the largest number of educational goals.

THEORETICAL LITERATURE AND PREVIOUS STUDIES:

The theoretical literature has dealt with two parts: Teaching strategies, where the following topics will be reviewed: (teaching strategies, the importance of modern teaching strategies, classification of teaching strategies, specifications of good teaching strategies, components of teaching strategies, objectives of modern teaching strategies, standards of teaching strategies, modern teaching strategies) and a number of From previous relevant studies.

TEACHING STRATEGIES:

According to cognitive development, modern teaching strategies come that consider the student the focus of the educational process, and demand the abolition of the student's negative role as a listener, observer, or note-taker, through the creation of educational environments that help raise the level of student participation in knowledge and education, and that facilitate the work of learning and the facilitation of learning. Learning is the one in which students are responsible for their learning, as they appear disciplined and self-organized, using effective learning strategies and appropriate knowledge (2017, Sen, Guler).

Shaheen (2010) defined it as the approach, plan, procedures, method, and methods that the teacher follows to reach specific learning outcomes or outcomes, including mental (cognitive), psychological (emotional), or kinesthetic (skillful).

It is a plan that describes the actions taken by the teacher and students to achieve the desired learning outcomes based on models and theories called learning theories, categorized into three main schools: behavioral, cognitive, and social (Al-Askari and Al-Jubouri, 2012).

IMPORTANCE OF MODERN TEACHING STRATEGIES:

Teaching strategies are of particular importance through what they work on mastering the scientific and

cognitive material of the curriculum content, increasing communication in the classroom between the teacher and students and between students and themselves, developing the multiple emotional aspects such as curiosity and a positive attitude towards learning, developing social values and independence in learning and strengthening the confidence of both The student and the teacher by himself, and the development of the skill aspects of students and teachers alike, in terms of active integration in the learning process, implementing the curriculum and achieving its goals (Abu Riash, Sharif and Al-Safi, 2009).

The importance of teaching strategies:

1. It increases student interaction at work.
2. Prepare students for live educational situations.
3. It motivates students to a lot of integration.
4. It develops in the student and teacher the desire to think research and learn until perfection.
5. It allows the student to retrieve information from memory, perhaps for more than one topic, while linking them to each other.
6. It demonstrates to the student his ability to learn without assistance, thus enhancing his confidence and self-reliance (Saeed and Al-Hosna, 2013).

CLASSIFICATION OF TEACHING STRATEGIES:

-TRADITIONAL (DIRECT) TEACHING STRATEGIES: It is a form of categorizing teaching strategies in which the teacher has the role of complete control over the educational situation in terms of: planning, implementation, and follow-up, while the student plays the role of the passive and ineffective recipient. The focus in traditional teaching is on cognitive outcomes. For science from facts, concepts and theories such as: the lecture method, the theoretical use of books and problem solving (Shaheen, 2010).

-MODERN TEACHING STRATEGIES: they are characterized by the independence of the learner's activity by giving him the opportunity to think and work to access information on his own. The activities in modern teaching strategies vary to face individual differences between students during the teaching process. It also contributes to developing students' ability to think scientifically and critically, and highlights the role of Modern strategies in the issuance of training the senses on observation as a basis for the development of all abilities of the mind such as analysis, reasoning, conclusion and judgment when dealing with various issues, and encouraging students to show team spirit and cooperative community work (Obeid, 2009).

- E-TEACHING STRATEGIES: A new classification of teaching strategies to serve e-learning based on the ability to use the Internet in all educational processes and activities carried out by students and related to knowledge, information, theories and facts they are going through. The use of modern electronic technologies contributes to teaching different subjects, whether theoretical or practical, through practice, exercise and simulation to achieve the goals of the educational process to the fullest. One of the justifications for using e-learning is its contribution to increasing the achievement of learners regardless of their abilities and ages, with a preference for young ages. At any time without being ashamed to participate, and e-learning presents the basic concepts and principles of the study courses in the form of purposeful tasks related to reality by bringing some phenomena that are difficult to imagine or apply in school laboratories, and it also prepares students for continuous and self-learning while saving time and effort In addition to the factors of suspense and fun during the learning process, the student can choose the best female professor in the domain of specialization he is learning, in addition to developing the skills of research, inquiry and self-reliance among students and adapting e-learning to different learning styles (Shaheen, 2010).

CHARACTERISTICS OF GOOD TEACHING STRATEGIES:

Shaheen (2010) mentioned the characteristics of good teaching strategies, which are:

-Comprehensiveness to include all situations and possibilities expected in the educational situation.
-Flexibility and scalability so that it can be used from one class to another.
-It is related to the main objectives of teaching the subject.
-Addressing individual differences between students.
- Take into account the type of teaching and its type, individual or group.
-Take into account the possibilities available in the school.

The characteristics of effective educational teaching strategies in teaching are defined as a practical method that depends on planning to study a situation, phenomenon or problem, or adding something new and identifying the size and dimensions of all available capabilities and capabilities to harness them afterwards to achieve the desired goals, and is characterized by realism, whether through planning or the means used and the capable employee It aims to achieve goals, and is characterized by a dynamic mechanism for the possibility of confronting a realistic situation, phenomenon or problem whose goals are difficult to achieve (Qatami, 2013).

TEACHING STRATEGIES COMPONENTS:

Al-Shatti and Al-Darwish (2018) mentioned that good teaching strategies consist of:

-Explanation and teaching method.
- Classroom management and general atmosphere.

-Environmental modifications to the surroundings of the educational process.
- Method of selecting and employing educational aids (2012, Hassan).

OBJECTIVES OF MODERN TEACHING STRATEGIES:

Teaching and learning strategies encourage students to acquire critical, creative and innovative thinking skills, reading, and diversity in educational activities appropriate for students to achieve the desired educational goals, support their self-confidence towards various domains of knowledge, help students discover important issues, ask different questions, and measure the student's ability To build and organize new ideas, and encourage them to cooperate, interact and communicate with others, acquire desired knowledge, skills, and trends, pass educational and real life experiences, and acquire higher-order thinking skills such as analysis, synthesis and evaluation (Qatami, 2013).

TEACHING STRATEGIES STANDARDS:

Learning and teaching strategies and the methods derived from them are subject to a large number of criteria and determinants, but it may be that the most appropriate of these divisions is based on the nature of the relationship that can be established between the teacher and the student, according to which the roles of each of them are determined in the educational learning process, and these strategies are: Presentation strategy recitation, interactive discussion strategy, discovery and questioning strategy, and the role of the teacher differs from the student according to this strategy; In the presentation strategy and related teaching methods, techniques, and learning experiences, it depends primarily on the teacher's role in this strategy by defining educational outcomes in a sequential manner (Al-Askari, Al-Jubouri, and Abdel-Ani, 2017).

MODERN TEACHING STRATEGIES:

Al-Hasnawi (2019) believes that the teacher should be familiar with all the activities he practices in order to help students achieve the desired change in their behavior, performance and abilities, and their acquisition of information, knowledge, habits, tendencies and values, so he must use good teaching strategies appropriate to the lesson that enable students to understand and connect the facts Among the modern teaching strategies are the following:

-INQUIRY STRATEGY: It is "the effort that the student makes in order to obtain a solution to a problem, an ambiguous situation, or an answer to a question" (Obaidat and Abu Al-Sameed, 2011, 158). It is based on the fact that the student should make an effort, which requires him to obtain information that explains the problem he is facing, according to his previous knowledge and experience that helps him to search for solutions and discover answers to his questions using his senses and thinking (Al-Askari, Al-Jubouri and Abdel-Ani, 2017).

-COOPERATIVE LEARNING STRATEGY: The steps for implementing a cooperative learning strategy are to choose the topic of the lesson, divide the lesson into groups, form students and distribute them into groups, take into account individual differences among them, distribute tasks to each student so that the work of the groups is evaluated by each other, and allocate a certain time to perform each group, and the teacher has to Taking into account the number of members of each group, the level of each of them and their distribution, roaming during work between the groups and taking notes on the performance of the students, and providing guidance and counseling to them (Mazur 2015).

-BLENDED LEARNING STRATEGY: Blended education means the use of modern technology in teaching without abandoning traditional education, and attendance in the classroom. The focus is on direct interaction within the classroom through the use of modern communication mechanisms, such as computers, networks and internet portals (Al-Askari, Al-Jubouri, and Abdel-Ani, 2016).

-BRAINSTORMING STRATEGY: This strategy is based on storming the human mind with a problem that challenges its information; He is active in examining them and searching for creative solutions to them that were not known to him before, and on this basis, brainstorming develops in the individual the ability to creative solutions to the problems that he is exposed to, and he comes up with many unusual solutions by presenting many opinions from the participants in a period of time. Short, and the brainstorming strategy is based on the principle of motivating students to participate in addressing the solution or motivating them to generate ideas that can be solutions to the problem using a method of individual or group thinking in solving scientific or life problems (Shaheen, 2011).

- PROBLEM SOLVING STRATEGY: an organized mental activity and a scientific approach that begins with stimulating the student's thinking through the existence of a problem that requires thinking and searching for its solution according to scientific steps and the practice of a number of educational activities, working on the student's acquisition of a set of theoretical knowledge, scientific skills, desired trends, and skills necessary for thinking All kinds (Al-Askari, Al-Jubouri and Abdel-Ani, 2016).

-THE EDUCATIONAL BAG STRATEGY: It is based on gradually collecting information when learning progresses, then reviewing what has been collected.

-STRATEGY: THINK, DISCUSS, SHARE: the idea of the strategy is based on students imagining the work and the task, thinking about it and brainstorming everything related to it. With the rest of the students for improvement, the strategy aims to acquire and develop thinking, organization and focus skills and the

importance of being open to others through their participation in the ideas that have been reached or the work that has been done (Ramadan, 2017).

- LEARNING CYCLE STRATEGY: This strategy consists of a number of successive stages, in which the teacher and student perform a specific action in each stage according to what is required for a stage. And seven stages, including concept discovery stage, concept presentation stage, concept application stage, evaluation and discussion stage.

- PROJECT STRATEGY: The project is a rich and in-depth experience that integrates the student into activities that are enjoyable for him and related to the curriculum, and is undertaken in full or in part outside the school. They plan and work on complex tasks, evaluate their performance and progress, and design the project around issues, questions, or needs that students challenge.

-DISCOVERY LEARNING STRATEGY: This strategy requires the individual to reorganize and adapt the stored information, and modify it in a way that enables him to see new relationships that were not known to him before the discovery situation (Said, 2015). The discovery process is not limited to learning concepts, but extends to learning the process of scientific research that what the student discovers are facts, concepts, principles and investigation, and the relations between them are more beneficial to him and are more widely used and last in memory for periods, and thus it works to develop experiences and skills of scientific research, in discovery The student is at the center of the educational process and learns as the world learns in his laboratory (Al-Mujaini, 2011).

- FLIPPED LEARNING STRATEGY: It aims to optimize the use of technology infrastructure, multimedia and digital technologies to enhance learning, and organize school events, to be the focus of the student's activities and details of his daily life. It also aims to organize daily practices represented in accessing the Internet to study activities and self-learning supported by media resources. The development and dissemination of knowledge output on students' skills in searching for information (2012), Kapp

PREVIOUS STUDIES:

Al-Amiri (2020) conducted a study aimed at knowing the degree to which biology teachers use modern teaching strategies and its relationship to the degree of their use of methods of developing scientific thinking among students in secondary schools in Iraq. The study population consisted of all secondary school biology teachers in Salah al-Din Governorate in the Republic of Iraq, during the second semester of the academic year 2019/2020, and they numbered (590) male and female teachers. The sample was chosen randomly, and it consisted of (234) male and female teachers, the correlative descriptive approach was used, and the questionnaire was used as a tool for collecting data. The study reached many results, including: The degree to which biology teachers in the secondary stage in Iraq use modern teaching strategies from their point of view came to a medium degree, and that the degree of biology teachers use of development methods the scientific thinking of the students from their point of view also came to a medium degree. The results also showed that there are no statistically significant differences in the responses of the study sample on the degree of using modern teaching strategies due to the variable of gender, and the presence of differences in the degree of their use of methods of developing students' thinking on the domain of organizing ideas due to the difference The variable of sex in favor of males, and the study showed that there are statistically significant differences in the responses of the study sample to the degree of using modern teaching strategies according to the He changed the teaching experience and for the benefit of those with more than 11 years of experience and methods

Al-Qahtani (2019) conducted a study aimed at identifying the degree to which Islamic education teachers practice modern teaching strategies in the State of Kuwait from their point of view. The study used the descriptive survey method, and the study sample consisted of (131) teachers, and the questionnaire was a tool for data and information collection. To many results, including: Islamic education teachers practice modern teaching strategies to a high degree, and the domain of constructivist teaching strategies ranked first, and active teaching strategies ranked last.

Radwan (2019) conducted a study aimed at knowing the effect of survey and brainstorming strategies on developing creative thinking among tenth grade students who study the Islamic education course, and the study sample consisted of (40) tenth grade students, divided into two groups in Fatima Al-Zahraa School. For girls, the control group consisted of (21) students, and the number of the experimental group was (21) students. The study used the quasi-experimental approach, and the results concluded that there is no difference between using strategic survey or strategic brainstorming in developing creative thinking for tenth grade students. Although these two strategies had an effective role in developing creative thinking in the Islamic education course, the results also found that there is no difference between using the investigation strategy or the brainstorming strategy in developing the creative thinking of tenth grade students, and that these two strategies have an effective impact In the domain of creative thinking in the domain of Islamic education.

Sa'ada (2018) conducted a study aimed at identifying the degree to which the science teacher at the basic stage in the Governorate of Amman possesses the skills of using remedial teaching strategies. Results: There are statistically significant differences between male and female teachers in the degree of their possession of the

skills of using remedial teaching strategies and in favor of the academic qualification, and the differences were in favor of the teachers who hold a scientific qualification.

Al-Ashqar (2017) conducted a study aimed at identifying the effect of using two active learning strategies in developing life skills in science for sixth grade students in Gaza. The study sample consisted of (114) students who were randomly selected. The study used a quasi-experimental approach with two experimental groups, the first studied with the strategy of scientific inquiry the second was studied using the numbered heads strategy, and the study tool was a life skills test. The results of the study showed that there were differences between the average scores of the students of the two experimental groups and the average scores of the control group students in the life skills test in favor of the experimental group.

METHOD AND PROCEDURE:

This part deals with a description of the study methodology and its personnel, as well as a description of the study's tools, procedures, and statistical treatment that were used in it.

STUDY APPROACH:

In its procedures, this study relied on the descriptive survey method, which depends on collecting data from the study sample of biology teachers, using the questionnaire prepared for the purposes of this study, and studying and analyzing the responses of teachers and teachers.

STUDY COMMUNITY:

The study population consisted of biology teachers in Al Muwaqqar Directorate of Education, who numbered (30) teachers.

THE STUDY SAMPLE:

The study sample consisted of all the teachers of biology in Al Muwaqqar education,who numbered (30) male and female teachers.The sample was taken from the whole community due to the small number and accessibility to them, and Table No. (1) Shows the characteristics of the study sample.

TABLE NO. (1): DISTRIBUTION OF THE STUDY SAMPLE ACCORDING TO ITS INDEPENDENT VARIABLES

Variables	Variable level	Repetition
Gender	Male	10
	Female	20
Qualification	BA	20
	Diploma	4
	High studies	6
Total	30	

STUDY TOOL:

To achieve the objectives of this study, the researcher built a questionnaire consisting of (30) items and it was directed to male and female teachers who study biology. 30) Paragraphs corresponding to a quintile scale (very large = 5, large = 4, medium = 3, few = 2, very few = 1). The paragraphs of the questionnaire were distributed into four domains:

PROJECT LEARNING STRATEGIES: This domain includes (8) paragraphs.

DISCUSSION STRATEGY: This domain included (8) paragraphs.

THE SURVEY STRATEGY: This domain included (8) paragraphs.

THE DIFFERENTIATED EDUCATION STRATEGY: This domain included (6) paragraphs.

VALIDITY OF THE STUDY TOOL:

The questionnaire was presented in its initial form to a number of specialists, experienced and specialized in the domain of scientific research and teaching, with the aim of judging the questionnaire's paragraphs, and knowing the extent of its clarity and comprehensiveness of all aspects of the subject for a study. On the linguistic reformulation of some paragraphs, the researcher modified the questionnaire in the light of the opinions of the arbitrators.

STABILITY OF THE STUDY INSTRUMENT:

The Cronbach's Alpha test was used to test the stability of the resolution, and the stability rate of the resolution was (0.804), and the values of the reliability coefficients for the resolution axes ranged between (0.895) and (0.731).

The following is a presentation of the values of the reliability coefficient for the domains and the total degree of the study tool:

TABLE NO. (2): RELIABILITY COEFFICIENT VALUES FOR THE STUDY TOOL DOMAINS

Domain	number of paragraphs	Cronbach Alpha
project learning strategies	8	0.731
discussion strategy	8	0.792
survey strategy	8	0.861
differentiated education strategy	6	0.895
overall degree	30	0.804

STUDY VARIABLES:

INDEPENDENT VARIABLES:

-Gender has two levels: (male, female).

- The academic qualification has three levels: (Bachelor's, Diploma, Postgraduate).

DEPENDENT VARIABLE: It is the response of the study sample to the study tool (the questionnaire).

STATISTICAL ANALYSIS:

Data were collected using the study tool, a questionnaire, and then unloaded into an Excel file, organized and entered into the statistical program (SPSS) to analyze the study data after coding the answers. Where descriptive statistics were used to calculate the arithmetic means and standard deviations

The five-level grading classes were also converted to three-tiered grading as follows:

(5-1) =4

4/3 = 1.33

This value is used to determine the length of the staging period as follows:

1-3-2.33weak

2.34-3.67Medium

3.68-5.00 large

PRESENTATION AND DISCUSSION OF THE RESULTS:

First: Presentation and discussion of the results related to the first question.

The first question: What is the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar education? The researcher extracted the arithmetic means and standard deviations for the domain of project learning strategies as follows:

THE FIRST DOMAIN: PROJECT LEARNING STRATEGIES.

TABLE NO. (3) ARITHMETIC AVERAGES AND STANDARD DEVIATIONS OF THE PARAGRAPHS OF THE DOMAIN (PROJECT LEARNING STRATEGIES).

Rank	Paragraph	Arithmetic average	Standard deviation	Score
1	Learners acquire the skill of self-learning	3.16	1.44	Medium
2	Know the importance of project-based learning	3.04	1.39	Medium
3	Take into account individual differences among learners	3.09	1.32	Medium
4	Connect the project outcomes to the lesson objectives	2.83	1.44	Medium
5	Implement evaluation strategies in line with the project	2.70	1.55	Medium
6	Provides feedback after completion of the presentation for learners to evaluate their work	2.64	1.39	Medium
7	Focuses on developing a spirit of free competition directed at individual projects	2.62	1.41	Medium
8	Diversity in the application of different projects (constructivism, enjoyment, problems, skill acquisition).	2.50	1.40	Medium
	overall degree	2.60	1.24	Medium

Table (3) shows that the paragraphs of the domain of "learning strategies by projects" came to a medium degree, the paragraph "learners acquire the skill of self-learning" came in the first place with an arithmetic average of (3.16) and a standard deviation of (1.44) at a medium degree, and the researcher attributed that The teacher's application of this type of strategy contributes to giving the student an opportunity for self-learning and managing the learning process by himself, by taking specific and organized steps to reach the planned goal at the end of learning. The paragraph came "Diversity in the application of different projects (constructivism, enjoyment, problems, skill acquisition) in the last rank, with an arithmetic average of (2.50) and a standard deviation of (1.40) in a medium degree. The researcher attributes this result to the fact that most teachers, especially biology teachers, have adhered to the traditional method of teaching, and that there are a number of teachers who do not have sufficient background to apply this type of strategies within class.

THE SECOND DOMAIN: DISCUSSION STRATEGY

TABLE NO. (4) ARITHMETIC AVERAGES AND STANDARD DEVIATIONS OF THE PARAGRAPHS OF THE (DISCUSSION STRATEGY) DOMAIN

Rank	Paragraph	Arithmetic average	Standard deviation	Score
1	Prepare learners for discussion	3.90	0.93	Large
2	Observe the logical sequence in discussing ideas	3.30	1.09	Medium
3	Know how important discussion is	3.20	1.47	Medium
4	Formulate questions that fit each element of the lesson	2.62	1.48	Medium
5	develop the learners' abilities to analyze and criticize	2.42	1.34	Medium
6	A variety of discussion types (investigative, group, small group).	1.74	1.04	Weak
7	Continuously working on informing the learners of themselves and the value of their ideas.	1.70	0.95	Weak
8	Determine the cognitive, skill, and emotional lesson outcomes	1.60	0.98	Weak
	overall degree	1.52	0.78	Weak

Table (4) shows that the paragraphs of the "discussion strategy" ranged between a weak and a large degree, The paragraph "preparing learners for discussion" came in the first place with a average of (3.90) and a standard deviation of (0.93) to a large degree, and The researcher attributes this to the teacher's use of this type of strategy, which greatly contributes to preparing the teacher psychologically and financially, provided that he conducts a panel discussion between him and the students to discuss a topic, and this strategy contributes to raising the teacher's debating skills and increasing his self-confidence in front of his students. The paragraph "determines the cognitive, skill and affective outcomes of the lesson" came in the last rank with an arithmetic average of (1.60) and a standard deviation of (0.98) with a weak degree with a failure on the part of the educational supervisors to guide and direct the teacher to such effective teaching methods

THE THIRD DOMAIN: THE STRATEGY OF THE SURVEY

TABLE NO. (5) ARITHMETIC AVERAGES AND STANDARD DEVIATIONS OF THE PARAGRAPHS OF THE DOMAIN (SURVEY STRATEGY).

Rank	Paragraph	Arithmetic average	Standard deviation	Score
1	Seek to develop higher-order thinking skills among learners	3.37	1.06	Medium
2	Questions are used for the purpose of the study material in the form of problems.	3.35	1.09	Medium
3	Provide learners with a set of open questions to generate scientific and creative ideas.	3.29	1.13	Medium
4	Encourage students to develop a plan to confront the problem that includes appropriate ideas and solutions.	2.60	1.22	Medium
5	Stimulate the learners' motivation towards self-learning	2.55	1.29	Medium
6	Assigning learners to tasks and duties that enhance their knowledge and research skill.	2.53	1.34	Medium
7	Know the importance of survey.	2.51	1.38	Medium
8	Determine the appropriate outputs when preparing for the lesson.	2.49	1.40	Medium
	overall degree	2.55	1.62	Medium

Table (5) shows that the paragraphs of the domain of "inquiry strategy" came to a medium degree with a average of (2.55), the paragraph "striving to develop higher-order thinking skills among learners" came in the first place with a mean of (3.37) and a standard deviation of (1.06) to a medium degree, and the researcher attributes this to the teacher's employment of the survey strategy that helps the teacher get out of the traditional pattern of thinking and presenting the educational content by transferring his knowledge and experience to students by applying this type of strategies, as it does not reach the solution path directly but rather It requires the teacher and the learner to go through an organized mental process to reach the optimal solution, which leads to the development of the learner's scientific research skills. While the paragraph "determines the appropriate

outcomes when preparing for the lesson" got the last rank with an arithmetic average of (2.49) and a standard deviation of (1.40). Appropriate training in this skill, and the lack of special courses in this aspect

THE FOURTH DOMAIN: THE DIFFERENTIATED EDUCATION STRATEGY

TABLE NO. (6) ARITHMETIC AVERAGES AND STANDARD DEVIATIONS OF THE PARAGRAPHS OF THE DOMAIN (DIFFERENTIATED EDUCATION STRATEGY).

Rank	Paragraph	Arithmetic average	Standard deviation	Score
1	Take into account the learning styles of learners.	3.74	1.12	Large
2	Diversity of tasks and activities assigned to learners.	3.42	1.32	Medium
3	Take into account the individual differences between learners (mental, psychological, physical and social abilities).	3.20	1.41	Medium
4	Determine the skills and abilities of each learner.	2.92	1.44	Medium
5	Your lesson is provided according to the learners' desire and their different intelligences.	2.60	1.48	Medium
6	Make sure that every learner in the virtual classroom has different experiences and experiences than other students.	2.58	1.28	Weak
	Overall degree	3.11	0.93	Medium

Table (6) shows that the paragraphs of the field of "differentiated education strategy" came to a medium degree with an arithmetic average of (3.11), the paragraph "taking into account the learning styles of learners" came in the first place with a average of (3.74) and a standard deviation of (1.12) To a large extent, the researcher attributes this to the teacher's use of the blended education strategy, which includes various methods and methods that contribute to taking into account the individual differences of students at all levels and needs, because this type of education looks at each learner as an individual with different needs from the other. While the paragraph "ensures that each learner in the virtual classroom has different experiences and experiences from other students" came in the last rank with an arithmetic average of (2.58) and a standard deviation of (0.93).

3. The second question: Are there statistically significant differences at the significance level ($\alpha = 0.05$) between the responses of the sample members towards the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar education due to the gender variable and the educational qualification variable?

- Gender variable (male, female)

To answer this question, a t-test was used for two independent groups (Independent-Samples-T-Test) to indicate differences according to the variable (gender), and the results of Table (7) show that.

TABLE NO. (7) :THE RESULTS OF THE T-TEST FOR TWO INDEPENDENT GROUPS TO INDICATE THE DIFFERENCES TOWARDS THE DEGREE OF BIOLOGY TEACHERS' USE OF MODERN TEACHING STRATEGIES FROM THEIR POINT OF VIEW IN AL MUWAQQAR EDUCATION DUE TO THE GENDER VARIABLE

Gender	Number	Arithmetic average	Standard deviation	"T" value	Indication level
Male	10	2.39	.56	.068	.214
Female	20	3.71	.71		

The results in Table (7) indicate that there are no statistically significant differences at the level of significance ($\alpha = 0.05$) towards the degree to which biology teachers use modern teaching strategies from their point of view in Al Muwaqqar education due to the gender variable depending on the gender variable. The researcher attributed the reason for the absence of statistically significant differences that teachers of both genders receive the same training courses for teaching strategies, and they have the same study plan that they implement during the school year, which is often withdrawn from the Internet completely without any modification to it. , in terms of changing the methods and procedures for implementing lessons and in line with the conditions available in the classroom, and that the educational supervisor's visit to teachers of both genders takes place once in the semester, with almost the same observations for both genders.

-Qualification variable (diploma, BA, postgraduate studies).

To find out whether there are differences due to the effect of years of experience variable, one way ANOVA was used.

TABLE NO. (8) :THE RESULTS OF THE (ONE WAY ANOVA) TEST FOR INDEPENDENT SAMPLES OF THE EFFECT OF THE EDUCATIONAL QUALIFICATION VARIABLE

Qualification	Number	Arithmetic average	Standard deviation	Degree of freedom	F	Indication level
BA	20	3.60	.54	2	.857	.415
Diploma	4	3.43	.47			
Higher studies	6	3.45	.55			
Total average	30	3.52	.52			

It is noted from Table (8) that the results of the results of the (One Way ANOVA) test for independent samples of the effect of the educational qualification variable, it is noted that there are no differences towards the degree of biology teachers use of modern teaching strategies from their point of view in the education of the distinguished brigade due to the educational qualification variable, where the owners of the bachelor's category obtained On the highest arithmetic average of (3.60), and the owners of the postgraduate category on the arithmetic average of (3.45), and the owners of the diploma category on the arithmetic average of (3.43). Where the level of significance was (g 415), which is a non-statistically significant value. The researcher attributed this to the fact that the educational system does not differentiate between graduate studies holders and others in terms of courses and educational qualification for them, as training is limited to only the first appointment, and simple courses are offered to them that do not exceed weeks and are not sufficient for them. It differentiates between them in the level of the classes they study, whether basic or secondary, this in turn led to this result.

RECOMMENDATIONS:

1. Directing biology teachers to use modern teaching strategies.
2. Directing those in charge of training programs for teachers in the Jordanian Ministry of Education to set up training courses for teachers of biology to train them on the use of teaching strategies.
3. Exchanging experiences between teachers through activating training workshops on the use of modern teaching strategies.
4. Offering training programs to use teaching strategies and how to employ them in the educational process.

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