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The Effect of Educational Modules Using the JIXO Strategy on the Development of Creative Thinking and Learning the Handball Shooting Skill of Students

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ABSTRACT

The athlete is exposed during training, especially the musculoskeletal system, to different loads that shed effort on the body, and may sometimes be the cause of sports injury, and the muscle groups working mainly in the performance of exercises and skills bear a higher percentage of injuries, especially in sports activities that require the use of a high level of strength to overcome great resistance, as is the case with players (weightlifting), as most practitioners of this effectiveness complain of deformity in the lower back (lumbar concavity) as a result of the pressure caused by the use of High weights, especially during the performance of basic exercises, the researcher decided to address this problem and prepare a therapeutic approach that includes rehabilitation means (infrared rays, short waves, therapeutic exercises, electric massage) to rehabilitate athletes (weightlifting) with chronic lower back deformity (lumbar concavity), which may contribute to identifying this pain, allowing practitioners of the effectiveness under research to participate effectively in the performance of their training and thus develop the skill level and achievement in this event and here lies the importance of research and the researcher used the methodology Experimental for its suitability to the research problem Accordingly, the researcher's choice of the research community came in the intended way, as it was determined by the players of the clubs of Najaf Governorate, weightlifting , and the researcher reached the most important conclusions of the approach prepared by the means used, a positive impact in reducing chronic deformities for members of the experimental research sample group (weightlifting) and the most important recommendations were to emphasize the general and private physical preparation and attention to training the muscles that form the muscle belt supporting the muscles of the lower back, represented by (the front and side abdominal muscles and the muscles of Lateral and posterior trunk) for its importance in the prevention of back injuries

The research aimed to identify the effect of using the JEXO strategy in developing creative thinking and learning the skill of shooting with handball for students, and the researcher adopted the experimental method and identified the population of his research, which included students of the second stage at the Faculty of Physical Education and Sport Sciences, University of Al-Qadisiyah for the academic year 2023/2024, and the researcher selected his sample by random method and the sample distributed the two groups equally and each group of (19) students, The teaching plan was prepared according to this strategy, and then the implementation of the research experiment began and lasted for eight weeks, with two educational units per week for each group, and after analyzing the data, the researcher concluded that the use of the JIXO strategy was better than the traditional method in developing creative thinking and learning the skill of shooting with a handball, and accordingly, the researcher recommended urging teachers to prepare educational strategy programs in which the student is active and effective in the lessons and has the freedom to make his decisions and is responsible for their performance.

1. Introduction and importance of the research:

Education is the most extensive field in which nations race to rise their societies and develop it to keep pace with the progress taking place in the world, and since education is an integral part of education, it has become an important function to achieve its goals, and education is a fundamental pillar of education in implementing what it seeks, as it reflects its goals and translates its premises with the educational institutions it possesses that nourish the learner with sound thinking, and from this point of view, the role of the teacher is important in the educational process, as he is directly responsible for achieving the strategic goals. for the study materials in the different stages of study, and helps the student in how to learn and how to solve his problems, and this is done through the use of modern strategies that describe the teaching procedures, which the teacher can use in choosing and analyzing the material and choosing the best methods and modern means to bring about effective learning in the shortest time. In the teaching process, which is organized, interconnected, interconnected and interacting with each other, and leads to the development and progress of the education process to achieve the desired goals, the use of educational strategies that affect, and that the game of handball is one of the team games that need appropriate and good motor performance, requires the use of body parts for various basic skills in handball, which requires an appropriate level for the possibility of using these skills in various conditions of the match, so it requires attention to skill preparation by choosing modern strategies in the process. Hence the importance of research in using the JIXO strategy and

applying it to a sample of students of the Faculty of Physical Education and Sport Sciences to increase their ability to think creatively and acquire basic skills of a precise motor nature, and thus enhance the student's ability to receive cognitive and scientific information and apply it with ease, a result that suits the use of a new strategy that would achieve the educational goals in the best possible way to add as much information as possible to the teacher in the field of specialization.

1-2 Research Problem:

The research problem came through the researcher's observation of the education lessons, he noticed that the teacher, although he is familiar with the basics of the teaching process, that the lesson is interspersed with some boredom and monotony as a result of the use of traditional methods, as well as if the student does not feel a degree of satisfaction and psychological satisfaction as a result of receiving to learn skills in modern methods that are close to himself, desires and tendencies, so the researcher thought of using a modern strategy in teaching to increase the degree of acquisition of motor information that needs focus and attention by students. For the purpose of controlling their performance and reaching the state of acceptance in the technical performance of the skill of shooting handball, overcoming the mistakes that the learner falls into, and reaching them to an ideal state by acquiring experiences that lead to a percentage change in the abilities of individuals to perform skills**.**

1-3 Research Objectives:

1- Identifying the impact of the educational units with the JEXO strategy in creative thinking and learning the skill of shooting with handball for students.

2- Identifying the learning advantage between the educational units with the JIXO strategy and the method followed by the teacher in creative thinking and learning the skill of shooting with handball for students.

1-4 Research Hypotheses

1- The educational modules with the JIXO strategy have a positive effect on creative thinking and learning the skill of shooting with handball for students.

2- The educational units in the JEXO strategy have an advantage in creative thinking and learning the skill of shooting with handball for students.

1.5 Areas of Research

1-5-1 Human Field : Second Year Students at the Faculty of Physical Education and Sport Sciences, University of Al-Qadisiyah.

1-5-2 Time Zone : For the period from 10/12/2023 to 8\ 3 \2024 .

1-5-3 Spatial Field : Halls and Playgrounds of the Faculty of Physical Education and Sport Sciences, University of Al-Qadisiyah.

2. Research methodology and field procedures:

2-1 Research Methodology:

The researcher used the experimental method (the two equal groups), which is the most honest method to solve many scientific problems theoretically and practically, and it suits the nature of the research problem.

2-2 The research population and sample:

The researcher identified the study population with the students of the second stage at the Faculty of Physical Education and Sport Sciences – University of Al-Qadisiyah for the academic year 2023-2024, which numbered 121 students. The study sample was randomly selected through lottery, and included two divisions with 42 students. Division C was allocated as a control group that applied the educational curriculum approved by the subject teacher, while Division B was adopted as an experimental group in which the "JEXO" strategy prepared by the researcher was used. After excluding students who failed, players on college or club teams, teachers, and those who were absent from classes before the implementation of the curriculum, the number of students in each group was 19 students. The final sample represents 34% of the total original population.

2.3 Homogeneity

The researcher performed the homogeneity of the sample in the variables of height, weight and age, and then the statistical treatments of these variables were done by calculating the torsion coefficient.

Table (1)

Shows the homogeneity of the members of the control group

Significance	Torsion coefficient	Broker	Deviation	Middle	Unit of Measurement	Variables	t
Smooth	0,012	171	4,33	170,5	poison	Length	1
Smooth	0,21	65	4,88	67,2	Kg	Weight	2
Smooth	0,532	25	0,782	21,5	year	lifetime	3

* All the values of the torsion coefficient were between (**±1), which indicates the homogeneity of the sample members in the above variables.**

2.4 Parity of the two groups

The researcher performed the parity of the two groups in the correction test for the control and experimental groups using the test (T) and Table (2) shows this.

Table (2)

Shows the parity of the (experimental) and (control) groups

level Significance	Calculated	The group Experimental	Control Group	Unit of Measurement	Variables	t

		on	Going to	on	Going to			
Willy-nilly	0,487	0,78	2,87	1,04	3,02	degree	Stability Aiming Test	1

Tabular value is (2,0322 **)**

2-5- Tools, devices and means used in the research:

- Direct observation
- Personal Interviews
- Skill Performance Assessment Form
- Creative Thinking Measurement Form
- Testing & Measurement Tools
- Four Sony cameras
- Electronic Stopwatch (SMTWTFS)
- Dell Laptop
- Medical device to measure height and weight
- Legal Handball Court
- Ten training handballs
- Floor Tape
- 5 cm wide adhesive tape
- Seven plastic signs for training.

2-6- Field Research Tests:

2.6.1. Name of the test: **Stability Aiming Test** . (Mohamed Abdel Reda , 2023, 60)

Test objective : Accuracy of aiming from stability.

The tools used are :(10) handballs, (4) iron squares of 40×40 cm are fixed at the corners of the target.

- Description of the performance method :

- ❖ The student stands behind the throw line at a distance of 7 meters, holding the ball
- ❖
- ❖ When the signal is issued, it shoots sequentially on the squares (1), (2), (3), and then (4)
- ❖
- ❖ The attempt is re-executed in the same order.
- ▪ **Conditions**: - One of the student's feet should be fixed and not move during the throw.

- The ball is played within three seconds of hearing the signal.

Registration : One score is calculated for each shot inside the designated box and (zero) for shooting outside the box.

- Zero is counted for the student if he aims and commits a legal violation, such as moving his second foot or not aiming within (3 seconds) of hearing the signal.

2-7 Exploratory Experience:

The researcher conducted the exploratory experiment on Thursday (14/12/2023) on (10) students from Division (E) outside the research sample from the original population, and that the purpose of the experiment is to ensure that the sample members understand the tests used in the research, know the validity and effectiveness of the devices and tools, and identify the time required for implementation, what are the expected errors and the assistant work team.

2-8 Scientific Basis of the Test:

2.8.1 Honesty:

The researcher used the method of apparent honesty, by presenting the test to a group of experts and specialists to obtain their opinions and observations on its suitability to achieve the specified goal. The results of the arbitration showed a high percentage of agreement between the arbitrators, as shown in Table (3).

Table (3)

Shows the honesty coefficient of the tests used

Statistical Significance	Percentage	Disagree	Okay	Skills	t

Moral	100%	zero	11	Shooting performance from stability	1

2.8.2 Consistency:

The stability coefficient was calculated using the retest method, by finding the correlation coefficient between the results of the first application and the results of the second application ten days after the survey sample. The Pearson correlation coefficient was used to measure the relationship, and the results showed a convergence in performance between the two tests, as shown in Table (4).

Table (4)

Shows the stability coefficient

Significance	Morale level (sig)	Stability coefficient	Skills	t
Moral	0,021	0,952	Shooting performance from stability	1

2.8.3 Objectivity:

Objectivity was calculated by determining the correlation coefficient between the evaluation of two independent judges. The results showed that the value of the correlation coefficient reached (0.931) at a significance level less than (0.05), which indicates that all tests have a high degree of objectivity, as shown in Table (5)

Table (5)

Demonstrates the objectivity of the tests

Significance	Morale level (sig)	Objectivity coefficient	Skills	t
Moral	0,03	0,944	Shooting performance from stability	1

2-9 Creative Thinking Test:

The researcher reviewed a set of measures related to creative thinking, and found that the Torrance Scale for Measuring Creative Thinking Ability (Appendix 1), which was developed by Sayyid Khairallah in 1974, is the most suitable for the objectives of the current study. This scale is characterized by being prepared to adapt to the Arab environment, and has been used in many local and Arab studies, and can be applied collectively at various educational levels, including the university level.

2.9.1 Validity of the test:

The researcher adopted the method of apparent honesty, and it was verified by presenting the Creative Thinking Scale to a group of experts in the fields of sports psychology, teaching methods, measurement and evaluation. This step aimed to ensure the validity of the scale and its suitability for the sample used. The scale has received full approval from all reviewers with a percentage of 100%.

2.9.2 Stability of the test:

The researcher relied on the half-segmentation method to calculate the consistency, using the results of the survey sample. The correlation coefficient between the scores of the individual items and the scores of the even items was calculated for both fluency, flexibility, and originality factors. Next, the correlation value was corrected using the Spearman–Brown equation. The consistency coefficients for originality (0.82), fluency (0.85), and flexibility (0.83) were coefficients, indicating that the test has a high degree of consistency across all three factors.

2.9.3 Exploratory Experience:

In order to ensure the clarity of the instructions for the test and the clarity of its paragraphs for students, and to identify the difficulties or obstacles that accompany it, the researcher applied the test to a survey sample of (20) students from outside the main research sample, and it was clear from this experiment that the instructions and paragraphs of the test are clear and that it is valid to apply to the two research groups.

2.9.4 Method of calculating the test:

Each examinee receives four scores on each test, divided into three dimensions: intellectual fluency, automatic flexibility, and originality. The total score is calculated by adding the scores of these three dimensions in all the test items. In evaluating the scores of the members of the two groups (experimental and control) in the creative ability test, the researcher relied on the following steps:

Intellectual fluency

One score is awarded for each new non-repeat response

Excludes superstitious and unreasonable responses

Automatic Flexibility

One score is awarded for each area of my life where responses appear

It is not taken into account the number of ideas, but the number of diverse fields to which they belong

Authenticity
A. Collect the responses of students from the two groups, and write down the repetitions of each idea, excluding the superstitious responses
b. 3 marks are awarded for each idea that appeared only once
c. Two marks are awarded for each idea that appeared twice
d. One grade is awarded for each thought repeated three times.
e. Gives 0 to ideas that have been repeated four or more times

The degree of originality is calculated according to the following formula:
3 (number of rare ideas) + 2 (number of ideas repeated twice) + 1 (number of ideas repeated three times) = Originality score

Overall Degree of Creativity

It is calculated by adding up the scores of fluency, flexibility, and originality for each student.

Objectivity of the test
To verify the consistency of the correction process, the researcher randomly selected 20 forms from the students' answers in the two groups, and they were corrected by independent referees. Using the Pearson correlation coefficient, the stability coefficients were:

Fluency: 0.97

Originality: 0.90

Flexibility: 0.86

This shows that the correction process was highly objective.

Table (6) shows the statistical parameters and values of (v) calculated for the control and experimental groups in the Creative Thinking Scale

Significance	Level of significance	Tabular categorical value	Calculated categorical value	Control group students		Experimental group students		Statistical features / Variables
				on	Going to	on	Going to	
Non-D	0.05	2,75	1,912	2,35	6,64	2,16	7,93	Authenticity
Non-D	0.05	2,75	1,782	14,28	72,93	13,75	74,52	Fluency
Non-D	0.05	2,75	1,643	12,38	43,11	10,08	42,89	Flexibility
Non-D	0.05	2,75	1,604	16,42	123,85	18,14	125,36	Overall Degree of Reflection

2-10 Pre-Test:

The researcher conducted the pre-test on the research sample from the control and experimental group in the test used in the research and measurement of creative thinking on Tuesday (2/1/2024) and on the playground and halls of the Faculty of Physical Education and Sport Sciences and in the presence of the researcher, after the researcher applied an introductory unit to introduce students to the nature of the test.

2.11 Educational Curriculum and Method of Implementation:

- The implementation of the main experiment began on Wednesday, 3/1/2024, and continued until 4/3/2024, under the supervision of the subject teacher. The implementation of the curriculum included 16 educational units, at a rate of two units per week for each group, on Sundays and Mondays. Each unit lasts 90 minutes. The sample was divided into two groups:
-

- Control group (Division C): Applied the traditional curriculum approved by the subject teacher
- Experimental Group (Division B): Applied the Educational Curriculum Using the "JESCO" Strategy
- Steps to implement the JESCO strategy:
- Dividing students into groups of 4 to 6 students, taking into account homogeneity among them
- Divide the content of the shooting lesson into parts with the number of people in each group
- Appointing a leader for each group is the most effective and mature
- Distribute learning parts to group members so that each student is responsible for a specific part
- Give students enough time to read the assigned part, and then form expert groups in which students from different groups with the same part come together
- Each expert group will discuss the key points in the assigned section, with each student trained to explain the part to the members of their original group
- Students return to their original groups
- Each student explained his or her part to the rest of his group with the opening of the discussion
- Supervise the progress of activity within groups and provide guidance
- At the end of the unit, each student is given feedback on their performance

2-12 Post-Test:

The post-test in the skill test and creative thinking was conducted on the research sample after the completion of the implementation of the educational program on Monday (8/3/2022) with the same conditions provided in the pre-test.

2-13 Statistical Methods:

The researcher used the statistical bag (SPSS) to perform statistical operations

3- Presentation, analysis and discussion of the results:

This section deals with the presentation, analysis and discussion of the research results according to the objectives and assumptions of the research:

3-1- **Presenting, analyzing and discussing the results of the pre- and post-tests of the skill of aiming from stability in research for the experimental group.**

Table (7)

It shows the differences in the pre- and post-tests of the experimental group of the skill of aiming from stability.

level Significance	t Calculated	Post-test		Pre-test		Unit of Measurement	Variables
		on	Going to	on	Going to		
0,0	6,76	1,96	5,42	0,78	2,87	degree	Aiming skill from stability

∗ Table value = 2,109 at a degree of freedom (18) and a significance level of (0.05)

Table (7) shows the values of the arithmetic mean, the standard deviation of the pre-test, the arithmetic mean, the standard deviation of the post-test of the experimental group, the calculated T-value, and the level of significance, and it was found that there are differences between the pre-test and post-test and in favor of the post-test.

The researcher believes that the progress made in the experimental group to the effectiveness of using the JIXO strategy, which included educational content that is carefully arranged and appropriate to the students' abilities, in addition to the exercises that are graded from easy to difficult and from simple to complex, and the presence of feedback, all of this contributed positively to learning and mastering the skill of shooting with handball.

The researcher also believes that the improvement of the experimental group to the application of the educational program using the JIXO strategy, which had a positive and effective effect on raising the level of skill performance of the handball shooting skill among students, which works to develop the thinking of the student, so that the student reduces knowledge and information to certain centers in the brain, where he recalls the use when required, and this is called feedback, and this is in accordance with what was stated (Judah Souad et al., 2006, 58) The GESCCO strategy contributes to the correct and accurate understanding of the concepts involved, as well as increasing the effectiveness of the learner's participation in the educational situation, developing his thinking skills, and positively affecting the teaching of skills.

The researcher attributes the improvement in the skill of shooting with handball to the use of the JIXO strategy, which depends on dividing the practical material into small parts, each part stands on its own to reach the degree of mastery in the skill performance, and then the extension of the student with the group to which he

belongs, the educational steps, some guidelines, and also the exercises graded from simple to complex, as it led to an increase in the level of students' acquisition of information related to the basic skill of handball through the mutual interaction between the learner and the educational material through a sequence. The knowledge and concepts related to learning the skill of shooting with a handball and arranging its parts, which makes the student's interaction progressively and gradual until the achievement of educational goals, and the organization, arrangement and sequence in learning the skill of shooting with a handball, and this in turn helped to arouse the motivation of students towards effective participation in the educational process and reaching the correct performance of the skill and the ability to link between different concepts and ideas and the student's feeling of pleasure and joy during the performance, and this is consistent with what Fatima Fleifel found. 2014, 17) that the JIXO strategy works to encourage students to work as a team that achieves their common goal, as well as works to develop positive attitudes towards teamwork, which leads to increasing their effectiveness and involving them in the educational situation.

3-2- **Presenting and analyzing the results of the pre- and post-tests of the skill of aiming from stability in research for the control group.**

Table (8)

Shows the differences in the pre- and post-tests of the control group for the shooting skill

level Significance	t Calculated	Post-test		Pre-test		Unit of Measurement	Variables
		on	Going to	on	Going to		
0,0	2,77	1,13	3,89	1,04	3,02	degree	Aiming skill from stability

∗ Table value = 2,109 at a degree of freedom (18) and a significance level of (0.05)

Table (8) shows the values of the arithmetic mean, the standard deviation of the pre-test, as well as the arithmetic mean, the standard deviation of the post-test for the control group, the calculated T-value and the level of significance, and it was found that there are differences between the pre-test and post-test and in favor of the post-test for the control group.

The researcher believes that the improvement of the control group is that teaching using the method followed by the teacher by explaining, giving and giving the method that the students are used to and the verbal explanation by the teacher adds some knowledge and information to the students, and the improvement may be due to the similarity of the educational environment of the control and experimental groups in terms of the teacher, capabilities and time period, and supervision, guidance, follow-up and feedback have their impact on the learning process, as the feedback provided by the teacher increased the students' motivation to Learning, as well as its use of verbal and moral reinforcement, is emphasized by

(Al-Taleb, 1976, 116) that praising the results achieved by the student from time to time will serve as new energies and an incentive to exert effort and lead to progress.

The researcher also believes that the reason for the progress in the post-test of the control group to the regularity of the research sample in the educational process is to the efforts of the caretaker of the educational process for the students and the continuous competition between the students, in addition to what the method followed by the teacher in teaching the members of the control group contained several points that contributed to the progress of their performance level, while how to gradually teach each skill from easy to difficult and correct the mistakes that appear in performance and guidance during practice, therefore. We find that the control group has achieved a percentage of learning as a result of practicing and repeating the skill during the educational units in which the method followed by the teacher was used, as it is mentioned (Al-Far, 2003: 148)) that "the repetition of the exercise has the advantages of making the acquired information effective and active during the learning of motor skills".

3-3- Presenting and analyzing the results of the post-test of the experimental and control groups to evaluate the skill performance of shooting from stability in handball.

Table (9)

Shows the differences in the post-test of the experimental and control groups to evaluate the skill performance of shooting from handball stability

level Significance	t Calculated	Control Group		Experimental Group		Unit of Measurement	Variables
		on	Going to	on	Going to		
0,0	11,59	1,13	3,89	1,96	5,42	degree	Aiming skill from stability

∗ Table value = 2.03 at a degree of freedom (36) and a significance level (0.05)

Table (9) shows the values of the arithmetic mean and standard deviation of the post-test for the experimental group, as well as the arithmetic mean and standard deviation of the post-test for the control group, the calculated T-value and the level of significance, and it was found that there are differences between the two post-tests and in favor of the experimental group.

The researcher believes that the JIXO strategy has worked to increase the interaction between the members of the experimental group, and the effective discussions about the required skill and the teacher's guidance have a clear impact on the understanding of the educational material, and this understanding may be transferred to their original group, which led to an increase in their skill mastery, and also helped him to exchange experiences between students and take into account the individual differences between them, and it also made the student the

center of the educational process so that they work and learn with each other and bear a common responsibility in their learning, and thus the success of the student is linked. The group members successfully the leader who explains the task, and this pushes the leader to make a greater effort to convey information well to all the students of the group, and this strategy urges students to research to reach knowledge and works to reduce the level of anxiety and fear of failure in students, provide reassurance and self-reliance, and increase self-confidence, in addition to conducting tests at the end of each lesson by the teacher to evaluate students, all of which worked to increase understanding and learning the skill more when This result is consistent with what was stated (Shahin, 2010, 23) The JESCO strategy is one of the types of cooperative learning that requires students to communicate with each other in order to fill in the missing information and integrate it into other information, and the process of participation is done with confidence, activity and satisfaction.

The researcher also attributes the reason to the use of the JIXO strategy, which led to students engaging in learning the skill, and the student became self-motivated to engage in the task assigned to him and learn, the student who has self-motivation to engage in the educational task when they are exposed to difficulties, they ask for help from friends and teachers, and this is due to the JESCO cooperative strategy that enhances teamwork among students, thus enabling students to deal with problems effectively as well as overcome the difficulties that they face. Motivate you to be busy learning, they form a plan to study, communicate with group discussions, and search for information to improve and increase their understanding and performance of the skill, and the elements of suspense are the most important features of this strategy, as it plays an effective role in which the student feels self-acceptance, so the student through the JIXO strategy is working in a specific task that makes him feel responsible, which increases his engagement in learning, and this result is consistent with what he said (Skinner, 1993, 572) Learners engaged in the learning process show behavioral employment of their learning in the practical activity accompanied by positive emotion, as they choose the tasks that suit their competence, make a clear effort in carrying out the tasks assigned to them, and exhibit positive emotions during the learning process of those tasks.

The researcher also believes that the use of the JIXO strategy provides an appropriate and appropriate educational environment that helps the student to learn well and raise his level in skill performance, as well as increase the students' motivation towards practicing handball, and this is what was emphasized (Abdul

Hamid Hassan, 2010, 87) that the JIXO strategy as a teaching method works to maximize learning outcomes such as improvement and positive attitudes towards learning topics and the ability to think, and that skills are useless if the learner is not able to apply them in interaction with others.

3-4 Presentation of the results of the post-test in the creative thinking test between the experimental group and the control group

Table(10)

Table (10) shows the significance of the differences in the post-tests of creative thinking and its abilities among students between the experimental and control groups.

Statistical significance	Value (v)		Control Group			Experimental Group			Sam
	Schedule	Calculated	x %	on	Going to	x %	on	Going to	si
function	2,02	3,57	23,58	2,08	8,82	23,83	2,82	11,83	3
function		4,71	18,37	13,75	74,81	13,44	11,08	82,39	3
function		4,13	26,35	11,84	44,93	17,25	8,93	51,76	3
function		4,94	11,73	14,87	126,73	10,90	15,57	142,77	3

Degree of Freedom = 36 Level of Significance = 0.05

Table (10) shows that there are significant differences in the post-test between the control and experimental groups in the creative thinking test and in favor of the experimental group, as the calculated values of (v) were (3.57, 4.71, and 4.13), which are greater than the value of (t) (2.02).

The researcher attributes the progress of the experimental group in creative thinking to the effectiveness of the "JEXO" strategy and its organization and accuracy in application, which directly helped in developing this type of thinking in students by employing habits of mind. This strategy is based on open-ended activities that are indirectly directed, such as the free expression of ideas and the use of imagination, which gave students the opportunity to come up with new ideas and express them freely in front of their peers, which enhanced their creative abilities.

This strategy differs from the traditional methods used in developing creative thinking in terms of content, teaching style, and employing habits of mind as an effective tool. It helps communicate the lesson objectives to students in a simple and engaging way, while providing a space for free thinking and offering opinions without restrictions, encouraging them to think deeply and be open to new solutions and ideas.

The use of the GEXO strategy has improved students' way of thinking, organizing their ideas, and presenting them clearly, which has enhanced their ability to produce creatively. Saadeh (2003, p. 173) emphasizes that "the balance between competition and cooperation is a prerequisite for achieving productive or creative thinking." Albayati (2007, p. 18) also points out that "creativity can be developed if there is a stimulating learning environment that contributes to the development of creative thinking."

The educational modules based on the "JEXO" strategy also contributed to making the student the center of the educational process, and gave him the freedom to express his opinion without hesitation, which helped in gaining knowledge and active participation within the lesson, and led to the creation of positive attitudes and a real desire to continue the program until the end. This interaction was reflected in their performance in the post-tests of the Creative Thinking Scale.

The researcher also believes that the "JEXO" strategy helped to enhance students' motivation towards achievement, especially among those with low achievement, through teamwork that provided a stimulating environment for correcting mistakes and developing performance. This is supported by Hassan (2011) who said: "Intrinsic motivation plays a crucial role in the creative process, as it is based on a self-purpose that reflects a desire to know, and a sense of pleasure in discovering reality and producing new ideas."

4. Conclusions and Recommendations

4.1 Conclusions:

- Conclusions and Recommendations:

4-1 Conclusions:

1- There is a positive effect on learning the skill of aiming and creative thinking among the members of the research sample of the experimental group.

2- It became clear to the researcher that the proposed program using the JEXO strategy led to the development of the skill of shooting and creative thinking in handball for students.

3- Optimal creative thinking requires the student to have a high level of skills, and this was evident in the post-tests of the experimental research sample.

4.2. Recommendations:

In light of the results of the current research, the researcher recommends the following:

1- Adopting the JIXO strategy as an independent curriculum in teaching and developing creative thinking in the faculties of education and sports sciences because of its great importance in the development of creative thinking.
2- Emphasizing the use of modern strategies by teachers because of their impact on the learning process of students.
3- The necessity of using the JEXO strategy in learning skills and in various events.
4. Holding courses and workshops for teachers to train them on the GESCO strategy and how to use it.
5- Urging researchers to conduct research on the impact of the Jixo strategy on other games because of its great importance.

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Appendix (1)

Creative Thinking Test

Part One

List as many uses as you consider unusual (i.e., not thought by your colleagues) of the following things that you think make them more useful and important.

a) Tin can

- **----------**
- **----------**

Do not turn the page until you are authorized

Time (5) minutes

b) The chair

- **----------**
- **----------**

Do not turn the page until you are authorized

Time (5) minutes

Part II

What happens if the order of things changes as mentioned later? Try to think of as many answers as possible that your colleagues don't think about.

a) What happens if a person understands the language of birds and animals?

- **----------**
- **----------**

Do not turn the page until you are authorized

Time (5) minutes

b) What happens if the earth is dug so that the hole appears on the other side of it?

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

Part III

a) If you are appointed in charge of disbursing money in the school shop of which you are a member and one of the club members tries to get into the minds of colleagues that you are dishonest, what do you do?

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

b) If all schools do not exist at all (or are even abolished), what do you do to become an learner?

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

Part IV

Think of two or more ways to make the ordinary, things that come better on your mind in terms of whether or not the change you're proposing can be implemented now. You should also not suggest something that is currently being used to make something better.

a) Bicycle (or wheel)

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

b) Ink pen

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

Part V

Make up the letters of each of the following words as many words as possible that have an understandable meaning (for example:

(Read) consists of the letters Q, R, and A, so other words can be from these letters, such as (Erq) (Decide), and it is possible to use the same letters more than once in the same word.

Follow the same method in the following words, forming as many words as possible that have an understandable meaning:

a) Democracy:

- ----------
- ----------

Do not turn the page until you are authorized

Time (5) minutes

b) Kirkuk:

- ----------
- ----------