The effect of using the constructivist learning model on learning some skills of the handles horse apparatus

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Abstract

Gymnastics is one of the games whose performance depends on mastering motor skills on the six devices (a horse with handles), Which requires an acceptable level of physical and skill preparation using the best methods of learning to reach the goal in the fastest time and least effort. Learning and mastering it leads to improved performance and ease of use on other devices. This method is one of the educational methods that assume that in order for students to achieve the greatest possible benefit from their education, they must not be allowed to be only passive recipients, but rather as productive individuals in their groups by urging them to actively participate in learning, to interact with their colleagues and explain to them what they have learned, and to listen for points of view. their gaze and encourage each other.

In light of the findings of the two researchers, the following was concluded:

1- The clear effect of the constructivist learning model on learning and retaining the skill of the handles device.

The researchers also recommend Bailey

1- Adopting the constructivist educational model according to the constructivist theory in teaching other basic skills effectively gymnastics

2- Providing the appropriate educational climate for the development of creative thinking and other types of thinking in our classrooms by developing the spirit of cooperation and respect for the other opinion, encouraging research and exploration and providing the necessary financial capabilities for that.

Keywords: constructivist learning, knobs horse device

Introduction

The increasing attention paid by studies and research in physical education and sports to learning methods in order to identify the most important of these methods that work on the interaction of the learner with the lesson in a way that is compatible with his general physical abilities and thus achieving educational goals and then raising the level of learning, which led to the conclusion of modern methods in Learning and seeking to apply the best for learning, through which the teacher can reach the learner to a better level of skill performance. One of these methods is the use of the constructivist learning model, "constructivism emphasizes the role of the learner in the educational process, and sees that learning in the first place is based on the learner finding a

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relationship between the new that he encounters and his previous concepts" (Bogouda, 1998). Gymnastics is one of the games whose performance depends on mastering motor skills on the six devices (a horse with handles), Which requires an acceptable level of physical and skill preparation using the best methods of learning to reach the goal in the fastest time and least effort. Learning and mastering it leads to improved performance and ease of use on other devices.

This method is one of the educational methods that assume that in order for students to achieve the greatest possible benefit from their education, they must not be allowed to be only passive recipients, but also productive individuals in their groups by urging them to actively participate in learning, to interact with their colleagues and explain to them what they have learned, and to listen for points of view. their consideration and encourage each other, "The players here behave in a cooperative behavior that helps each other and has a motivational basis and a distinct structure that makes the educational material exciting and interesting for learning, which enhances the educational and social aspects."Cook, 1991The problem of the research lies through the researchers' observation of the lack of interest in diversity in the use of methods to learn the skills of the learners despite the importance of that and this in turn leads to poor learning of the skill of the horse handles device. Therefore, the researchers decided to carry out an experimental study by dealing with a new educational method, which is the constructivist learning method, which is a newly used method in the field of teaching some basic skills of the horse handles device to implement it during the exercise to identify other learning methods that can achieve the learning of the largest possible number of learners. It is better, and hence the importance of introducing the method of the learning model by means of acquiring some basic skills on the handles device in gymnastics and knowledge of retention in order to reach scientific results that can be used in the learning process and to develop the level of performance.

2-1 Research Methodology:

The nature of the research problem to be studied necessitates that we use the experimental method as "the most adequate means in reaching reliable knowledge." (Deo Bold, 1984) The sample being "a model that includes a part or part of the units of the original community concerned with research and is represented by it so that it bears its common characteristics, and this model or part enriches the researcher from studying all the units and vocabulary of the original community." (Amer, 1993)

2-2 Research Sample:

The research sample was taken at random from the second stage students in the College of Physical Education - University of Diyala represented by Division (B) by lottery because they take two educational units per week. The total of the two divisions was (55) students, and the students practicing gymnastics were excluded from them, as well as the students who failed those who had previous experience, and the students who were frequently absent were excluded, so the research sample became (30) students, with (15) students per group, and the research sample constituted (30%) of the total original adult (240) students were sample research is divided by lot into two groups, a experimental group and a control group depending on the type of exercise in constructivist learning, as it was within normal limits for the coefficient of torsion (+ 3) as most sources indicate the fact that its content "that the greater the The resulting scores are confined between (+3) in the normal distribution curve. This indicates that the scores are normally distributed with the presence of homogeneity in the selected sample. (Mustafa, 1999) as shown in Table No. (1)

It shows the number of research sample members and modern educational methods

the group	Division	the total number	educational programs
Experimental	**B**	15	**constructivist learning style**
control	**B**	15	traditional style
Total		30	**-**

2-2-1 The homogeneity of the sample in growth indicators:

The researchers conducted the homogeneity of the research sample in the variables that may have an impact on the results of the research, and these variables included (height - weight - age) and through the use of the coefficient of variation law, as shown in Table (2).

It shows the homogeneity of the sample in the research variables for the experimental group

T	Indications	measuring unit	the middle arithmetic	deviation normative	Variation coefficient
1	height	poison	166	4.22	2,40
2	Bloc	kg	72.50	2,45	2.95
3	Age	year	19.50	1,11	3,33

It shows the homogeneity of the sample in the research variables for the control group

T	Indications	measuring unit	the middle arithmetic	deviation normative	Variation coefficient
1	height	poison	162	4.14	2,30
2	Bloc	kg	70.65	1.87	2.77
3	Age	year	19	0.89	3,22

3-3 Devices and tools used in the research:

3-3-1 Equipment and tools used:

(Camera - video recording. - Device CDSuper sunny type. Medical scale. Calculator (Pentium-4). Legal handles device, 2 manual stopwatches, manual electronic calculator.

3-3-2 Information collection methods:

- Arab and foreign sources and references.
- Data registration form.
- Tests and measurements.
- Personal interviews.

3-4 Measurements and tests used in the research:

3-4-1 Measurements for height, weight and age:

The researchers made the following measurements:

– Length: The two researchers used the restameter for this purpose, which is a stand installed vertically on a wooden edge, and the length of the stand is (250) cm, so that the zero level is at the level of the wooden base, and there is a holder installed horizontally on the post so that it is movable down and up, the laboratory stands on the base Without wearing shoes with his back facing the post, the laboratory must take into account the tension of the body up and looking forward, the holder is lowered until it touches the upper edge of the head, as the number facing the holder expresses the length of the laboratory to the nearest one centimeter.

– Weight: The researchers used the medical scale for this purpose, as the examinee stands erect on the scale without wearing shoes so that his weight is distributed equally on the feet.

3-4-2 Muscular strength:

1- Test name: Grip strength test (Mohamed, 1996):

Purpose of the test: This test aims to measure the strength of the grip.

Tools used: manual dynamometer, magnesium carbonide powder.

Performance specifications: The tester dips his hand in the magnesium carbonide powder, then holds the device in the palm of the distinguished hand, and then presses it with the maximum force possible.

the conditions:

– It is preferable to test the strength of the right fist and then the left.

– Note that the arm carrying the device should not touch any external object or the player's body himself, and the swinging of the arm should be avoided when performing.

– Return the device indicator to (zero) after each attempt.

Recording: The device's pointer indicates the laboratory's grip strength in kilograms (the laboratory has three attempts to record the best of them).

3-4-3 Skills tests for the requirements of the handle horse device:

3-4-3-1 Forward scissor lift test:

The purpose of the test: This test aims to measure the player's ability to perform the skill of the front scissor swing.

Tools used: Handle horse device, gymnastics rugs.

Performance specifications: The player takes the position of the saddle pivot and then performs the front scissor swing.

Registration: The skill has been evaluated with the agreement of the members of the jury, so that the final grade for the skill is (10) degrees.

3-4-4-2 Posterior scissor lift test:

Purpose of the test: This test aims to measure the player's ability to perform the skill of backscissor swing.

Tools used: Handle horse device, gymnastics rugs.

Performance specifications: The player takes the position of the saddle pivot and then performs the back scissor swing.

Registration: The skill has been evaluated with the agreement of the members of the jury, so that the final grade for the skill is (10) degrees.

3-4-4-3 Circular Weighted Test:

Purpose of the test: This test aims to measure the player's ability to perform the skill of circular swing.

Tools used: Handle horse device, gymnastics rugs.

Performance specifications: The player takes the forward pivot position and then performs the circular swing.

Registration: The skill has been evaluated with the agreement of the members of the jury, so that the final grade for the skill is (10) degrees.

2-5 Experimental Experiment:

The main purpose of the pilot experiment is to identify the ability, effectiveness and validity of the tools, team work, tests and devices that help him in the main experiment, as well as identifying and addressing errors.

Accordingly, the researchers conducted the exploratory experiment for skill tests on (3/3/2019) on Division (B) on (15) students from the original community.

2-6 Pre-test:

The pre-test was conducted on (5/3/2019) after providing the appropriate conditions and explaining the nature of the tests to students and teaching staff, and giving the necessary time to warm up and perform tests on the research sample.

2-7 Curriculum:

The subject teacher started implementing the curriculum, and the implementation of the curriculum took (16) educational units and by (2) educational units for each group per week, and the implementation of the main experiment began on (10/3/2019) until (10/5/2019), note if it happened A religious occasion with an educational unit that compensates for another, and that the time of the educational unit is (90) minutes, and the method of learning was done using the constructivist learning method according to the following:

1- 8 Post-test:

The post tests and skills requirements for the handles horse device and for the two groups (experimental and control) were conducted on 14/5/2019, after completing the prescribed period of the main experiment (20) educational units, which lasted for (10) weeks, and the researchers committed as much as possible to creating the conditions In which the tribal and average tests were conducted in terms of time and place and the tools and devices used with the help of the educational staff themselves.

2-9 Evaluation of motor skills:

The skills were evaluated on the basis of the complete skill, and each skill was evaluated from (10) degrees, and the researcher used five arbitrators accredited by the Iraqi Federation of Gymnastics as a committee to evaluate the scissor weighting (front and back) and circular for the two groups (experimental and control) by watching the TV show "Can Relying on the opinions of experts in evaluating different sports skills, as this depends on the capabilities of the expert, his culture and his level of education. All of this can transfer the self-evaluation into an objective evaluation, especially when a number of experts participate in the evaluation." Which included the degree of the four judges and the degree of the dismissal judgment, which is considered a measure of the degrees of the four judges, to find out the homogeneity of the degrees of the judges and according to the legal differences stipulated in the International Arbitration Law for Gymnastics. final player,

2–10 Statistical means:

The special program used in the statistical fields has been used with a system (spss) to extract the data for the search

3- Presentation, analysis and discussion of the results:

In light of the results reached by the researchers, they will try to display, analyze and then discuss them according to the objectives and hypotheses of the research.

3-1 Presentation and analysis of the pre and post tests of some skills of the handles horse device and their discussion for the experimental group:

Table (3) shows the arithmetic means and standard deviations of the pre and post tests some skills of the experimental group's horse handles device

skills	measuring unit	tribal tests		the exams dimensionality		Values T		The significance of the differences
		s	+p	s	+p	calculated	tabular	
Grip strength test	kg	18.500	3.45	24.750	4.34	9.45	2.09	moral

Forward scissor lift test	Degree	1.90	0.98	3.35	1.90	2.99		moral
Back scissor lift test	Degree	1.24	0.87	3.85	1.78	2.87		moral
circular weighted test	Degree	1.20	0.66	3.40	1.44	2.45		moral

*Values (TThe tabular value is below the level of significance (0.05.). (And with a degree of freedom (1 4) it is (2.09)

3-2 Presentation and analysis of the pre and post tests of some skills of the handles horse device and their discussion to the control group:

Table (4) shows the arithmetic means and standard deviations of the pre and post tests some skills of the handles horse device for the control group

skills	measuring unit	tribal tests		the exams dimensionality		Values T		The significance of the differences
		s	+p	s	+p	calculated	tabular	
Grip strength test	kg	18.00	3.40	20.55	3.45	5.65	**2.09**	moral
Forward scissor lift test	**Degree**	1.85	0.88	2.65	1.970	1.88		insignificant
Back scissor lift test	**Degree**	1.30	0.88	2.65	1.55	1.87		insignificant
circular weighted test	**Degree**	1.30	0.76	2.66	1.85	1.55		insignificant

*Values (TThe tabular value is below the level of significance (0.05.). (And the degree of freedom (14) is (2.09)

3-3 Presentation and analysis of the dimensional post tests of some skills of the handles horse device and their discussion of the two experimental and control groups:

Table (5) shows the arithmetic means and standard deviations of the dimensional tests of some skills of the handles horse device for the experimental and control groups

skills	measuring unit	experimental group		control group		Values T		The significance of the differences
		s	+p	s	+p	calculated	tabular	
Grip strength test	kg	24.75	4.34	20.55	3.45	7.76	**2.09**	moral

Forward scissor lift test	Degree	3.35	1.90	2.65	1.970	2.86		moral
Back scissor lift test	Degree	3.85	1.78	2.65	1.55	2.98		moral
circular weighted test	Degree	3.40	1.44	2.66	1.85	2.65		moral

*Values (TThe tabular value is below the level of significance (0.05.). (And the degree of freedom (28) is (2.09)

3-4 Discussing the results:
1- Right and Left Grip Strength: The researchers attribute this moral difference between the results of the tests (before and after) for the experimental group of the grip strength variable to the role of the constructivist learning model that the researchers used. In the speed of leaving and the speed of pivot and in a beautiful rhythmic manner, not to mention the resistance exerted by the player's body against the centrifugal force that is trying to distance the player's body from the fulcrum point, in addition to that, the skill exercises included in the proposed curriculum helped to develop the strength of the grip, as many of these exercises Requires the player movements from the pivot, "The repetition of the pivot on the horse of the handles with a large number up to the point of fatigue is a suitable motor element to strengthen the pivot." [(] C. Norman 1978) which strengthen the power of the fist rate. As the organized training results in an increase in the individual's performance ability as a result of performing exercises for several days, weeks or months, by imprinting the body's systems on the optimal performance of those exercises. [(]Edgeton, 1976). So the player has knowledge of how to distribute his muscular activity related to performance and sort out those non-working muscles that cause impediment to performance and stress the player's body, as "exercises on equipment and free exercises are one of the best means to achieve agility."[(] Mayouf, 1985)
2- Forward scissor swing test The researchers attribute the reason for the development of the learning speed of the special requirements skills indicated in Table (5) to the use of the constructivist learning model for the experimental group, because they facilitated the player's work and helped him to learn, and enabled him to practice scissor swing (front and back) and circular without the need for assistance From the trainer, which facilitated the educational process for the trainer and made him available to give appropriate feedback to learners by observing them, which accelerated learning "because feedback through knowledge and observation of results accelerates learning, and results in stable learning" [(] Muslim, 2000), and since the practice works to raise the degree of the learner's response to the learned skill in a future attempt, as a result of performing the largest possible number of repetitions, it facilitated the practice of the circular weighting skill without the need for help from the coach, which gave the player the experience in spinning because "practice And repetition works to increase the links between the stimulus (legs sling device) and the response (performance of the forward swinging skill). The value of repetition lies in that it advances and develops experience and helps master action and speed of implementation[(] Muslim, 2000)
3- The background scissor-weighted test The researchers attribute this moral difference and development to the fact that the use of the B-learning model has facilitated the learning process

for the player by increasing the chance of feeling adequate thrust of the arms with the movement of the two legs. The movements are carried out by comparing the feedback from the body's organs with the corrective reference stored in the brain as a result of the exercise. [(]Danj, 1989), the learner learns to correct mistakes and put the body through comparison based on the sensory effect. When the player performs any new skill, there will be an internal feedback that gives the brain the position and shape of the body, and that this leaves an impact on the central nervous system and this is called the motor form.[(1)] And the closer the performance is to the set goal, the better the performance, but if the performance of the learner or player moves away from the marked goal, the level of his performance is weak, as (Saad Jalal and Muhammad Hassan Allawi, 1982 AD) indicated that "feelings play an important role. In the process of active compatibility of complex movements that require distinguishing between its different parts.[(] Saad, 1982), they had a peculiarity that led to the realization of the kinetic visualization of the scissor lift (background) on the horse of the handles, "the visualization is the image that the learner takes by looking and explanation of the movement and is imprinted on the brain, and practice and experience lead to the stability of this image, and this image is An initial basis for the learner's performance of the movement. [(] Wajih, 1989),

4- Circular weighting test: The researchers attribute these differences to the use of the constructivist learning model. In light of the extracted results, the application of the educational curriculum and the explanation of the exercises and their presentation by the coach came in line with the level of the players, their ages, and their physical and skill capabilities, and this was evident through the intense desire of the research sample (Experimental) in practicing exercises on the devices, which in turn was a good investment of time and to focus their attention and keep them away from the state of boredom. It must be regulated in order for the exerciser to perform the motor activity (motor skill) well. [(] Qassem, 1987). And what was indicated by (WajihMahjoub, 2000) "the more variables in the forms of exercise, the more certain changes are given in the type of learning." In this regard, we refer to the role of the nervous system in the process of teaching motor skills. The central nervous system receives a large number of information from various sensory organs (hearing, sight, and motor sense), and integrates them all to determine the appropriate response that the body performs. Most of the information is stored in the cortex. The brain At the beginning of learning a specific skill, the left hemisphere of the brain (the analyzer) determines the working muscles and the timing of their contraction through a kinetic approach (the image of movement from all its technical aspects printed in the brain as a result of an explanation and presentation of the movement)

Conclusion
In light of the findings of the researchers, the following was concluded:
2- The clear effect of the constructivist learning model on learning and retaining the skill of the handles device.
3- The effectiveness of the educational program, educational activities, and the educational means in learning and retaining the skill of the handles device, and there is a discrepancy in learning and retaining the skills of tap and handball through the constructivist learning method.
The researchers also recommend Bailey
3- Adopting the constructivist educational model according to the constructivist theory in teaching other basic skills effectively gymnastics
4- Providing the appropriate educational climate for the development of creative thinking and other types of thinking in our classrooms by developing the spirit of cooperation and respect for

the other opinion, encouraging research and exploration and providing the necessary financial capabilities for that.

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A model of an educational unit in a constructivist style

Activity type	the time	Motor skills and activities	Organization	Used equipments	Notes
prep part	15 d				
Introduction	2 d	Preparation of tools, students standing, attendance recording, performing the sports salute		Emphasis on saluting	
		walk – trot – jogging to the sides – jogging with raised knees – trot with the whistle – jump up – walk – stand		Loudly	
warm up	3d	(Standing) with knees bent, arms raised and lowered in		- Confirm order during	

		front... (4 repetitions)			
		(Brooke, arms sideways") Killing the torso to both sides in succession with raising and waving the arms.. (4 repetitions)		warm up	
exercise	10 d	(Brooke, transverse flexion) Alternate extension and bending of the arms to the sides.. (4 repetitions)			
physical	70 d		**Handle device**		
The main part	10 d	Explanation and presentation of the skill of the front paddle on the horse's handles		Emphasis on the movement of the arms	
educational activity		1. Performing the skill of the front paddle on the horse's handles.					

Note: The educational program is implemented for all educational units as follows:
1. Each group is assigned a (group leader) in a method of (constructive learning).