

The effectiveness of using a constructive learning strategy at the level of learning Handball defence skills

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Introduction and research problem

The teaching strategy is one of the modern educational scientific terms and has an active role in advancing the educational process. Education is the process of mutual interaction between the teacher and the learner in order to learn and master the knowledge and skills that must be learned in a given period of time and the extent to which students acquire active sports activity.

Jabir Abdel Hamid (2006) points out that the modern trend in the educational process invites us to the positive learner in obtaining the experience that is prepared by the educational situation, which moves the focus of attention in the educational process from teacher to learner to the latter positive attitude active in achieving the educational goals required (3: 145)

Blanch Salama and Nelly Ramzi (2009) explained that the teaching strategy is more general and comprehensive because it is a set of actions in a sequence of moves to define educational goals of relative comprehension. The best possible learning outcome can be achieved if there is This strategy is implemented in the light of the conditions and requirements of the educational situations (2: 288).

One of the most prominent strategies based on constructivist philosophy is the constructivist learning model (8). It is one of the educational methods that emphasizes learning based on understanding through the intellectual participation of learners and the acquisition of knowledge through knowledge. Structural learning takes into consideration individual differences in application In addition, it provides feedback,

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fits all ages and levels, and gives ample scope for the development of knowledge among learners (22: 5)

Constructivism Theory asserts that cognition is produced through the interaction between accumulated prior knowledge and new knowledge, and then it is stabilized by practice.(123:27)

In this regard, Khalil & Haidar, Abdul Latif Younis, and Mohamed Jamal Aldin (2008) emphasize that the constructional learning model works to link science to culture and society and seeks to help students build their scientific concepts and knowledge through four stages derived from the three stages of the learning cycle (Conceptualization- concept extraction - application of the concept) These four stages are the stage of advocacy and the stage of exploration and the stage of proposing interpretations and solutions and decision-making stages and thus be able to improve the learning process (6: 440)

In this model, "Khairi Al-Maghazi", "Badir Ajaj" (2000), "Zainab Omar", "Wafa

Mafraj" (2009) agree that this model helps students build their concepts and scientific knowledge. The stages of the four model on the ways they learn and work by specialists in science and mastery, and these four stages of two aspects of science and culture and with the different field of study and its subject in terms of science or culture, but the course of the lesson one with the observation of overlap and interaction between the two sides (108,107: 7) (8: 438-441).

Handball is one of the games that has developed a lot lately. If we look at the level of performance in the various Olympic and continental tournaments we can recognize the tremendous progress and the remarkable rise in the level of performance of the players, as well as the level of development of all aspects of the game in terms of physical or skill or As well as administrative. (18: 9)

The player's possession of various forms of skilful performance similar to the requirements of the game allows him to choose the best in most of the actual positions of the game and increase the

ability to manoeuvre and implement the plans of different places and trends and is not surprised by the position was not trained, and thus achieve the speed of accuracy and compatibility Perform the required assignment. It is therefore important to use training forms that are close to the form of real competition (87:12) (29:22)

The handball defence is all attempts by the players from the moment they lose the ball to prevent the players of the attacking team by the legal means allowed to score a goal and work to regain control of the ball, the transfer of the team from attack to defence when they lose the ball, (47:15) The players are quick and quick from offensive areas to defensive zones and trying to impede the opponent's attack is individual and collective attempts by the player or team when the ball is against the opponent.

And that the ability of the players to shift from attack to defence is a measure of the ability of the team and good training, a defence that performs its functions in a good way to create a positive

psychological impact of strong players and covers all stages of the game during the game, not limited to the defence of one job only and avoid hitting the goal But it has other functions and goals also positive,

including the attempt to acquire the ball to start the stages and operations of the attack is the stage of preparation of the attack, such as the attack has the duty of a rapid shift to defence once the players lose the ball and the attacker to get the advantages of the speed of exploration As the defensive of the various directions in front and back and aside from the most important defensive skills, where the aim of the attempt to prevent the attacker to implement the plans (134: 13).

It is worth mentioning that the method of constructive learning is one of the modern methods of learning based on the philosophy of building knowledge and gaining the individual knowledge based on his experience and the use of modern education technology in the stage of advocacy, and develops the method of constructive learning of the learner confidence in solving

problems and correct misconceptions by discussing the knowledge reached by Information and skills with others is one of the best ways and methods of teaching knowledge and skills, and given the handball and the skills it contains defensive includes the defensive moves of different directions forward and backward and to the other of the most important defence skills so that the sidewalks If the striker has the ball to try to prevent him from passing or pointing, it is necessary for the students to perform these skills well.

Through the experience of the researcher and her work as a teacher of the college and its observation of the students during the performance in the practical lectures noted the weakness of the technical performance of the non-exact skill and support the researcher to the traditional method of teaching based on the explanation and model, which makes the teacher is the focus of the educational process and the future student only, That there are shortcomings in the use of modern methods of teaching, which called on the

researcher to use the strategy of constructive learning as a method of modern,

which depends on the development of thinking and the extent of information and skills and the positive participation of the student It helps to improve the level of skill and physical abilities in the teaching of defensive movements in handball because of the active and effective participation of the learner in building the student's experiences based on his previous knowledge of creativity, innovation and training.

Constructions at the level of learning some defensive skills in handball for students of the third division at the Faculty of Physical Education Girls Helwan University

The aim study

The aim of the research is to identify the effectiveness of the use of constructive learning strategy at the level of learning some defensive skills in handball among students of the third division at the Faculty of Physical Education, Helwan University.

Research hypotheses

1-There are statistically significant differences between the averages of preand post measurements in the experimental research group at the level of education of some defense skills in handball in the students of the third division of the Faculty of Physical Education, Helwan University for the benefit of dimension measurements.

2-There are statistically significant differences between the averages of preand post measurements in the control group in the level of education of some defensive skills in handball in the students of the third division of the Faculty of Physical Education, Helwan University for the benefit of dimension measurements.

3-There are statistically significant differences between the averages of post measurements in the experimental and control groups in the level of education of some defensive skills in handball among the students of the third division at the Faculty of Physical Education, Helwan University for the benefit of the experimental group.

Search terms

The Constructivist

"It is the process of cognitive construction that takes place through the interaction of the individual with the surrounding objects and people. In the course of this process, the individual constructs certain concepts of their nature and this directs his behavior with all that surrounds him with things, people and events" (14:36).

Structural Learning Method: The Constructivist Learning Style Is one of the methods based on the structure and consists of four stages sequentially (advocacy, exploration, proposing interpretations and solutions, taking action) and each stage of each function is a prelude to the next stage, "the stage of advocacy to push students to search and exploration and exploration stage looking The students lead students to reach the concepts or relationships required through their interpretations and suggestions that they reached during the exploration stage and in the stage of taking the measures. Interpretations (20: 37-40).

Search procedures

Research Methodology:

In accordance with the nature of the research and to achieve its goal and test for the validity of hypotheses, the researcher used the experimental approach in the design of measurement (pre-post) of two groups, one experimental and the other a control and suitability to the nature of research.

Research community:

The research society in the third year students of the Faculty of Physical Education for Girls University of Helwan for the academic year (2017 - 2018) and the number of (296) students, and identified the researcher students of the third group to discuss the following reasons:

- Previously learned defense skills handball.
- Their acquired experience needs to be installed and mastery to raise performance.

The research sample:

The sample was randomly selected from the students of

the third year of the Faculty of Physical Education for Girls - Helwan University for the academic year (2017 - 2018) and the number of (60) students studied by the researcher according to the schedule by 20.3% of the research community were divided into two equal groups each Of them (30) students, one experimental and the other an officer, and was selected (16) students to carry out exploratory experiments and scientific transactions of the tests under consideration.

Homogeneity of the research sample:

The researcher calculated the sporadic coefficient of the sample and the frequency distribution and the equivalence between the control and experimental groups in the variables (age, height, weight, intelligence), physical fitness and skill performance under handball research.

Table (1)

Torsion factor of the sample in growth rates, intelligence and physical variables The skill level is under consideration

N = 1 n = 30

| Variables | measuring unit | Control group | | | | The experimental group | | | |
|--|----------------|---------------|--------------------|----------|---------------------|------------------------|--------------------|----------|---------------------|
| | | SMA | standard deviation | Mediator | Torsion coefficient | SMA | standard deviation | Mediator | Torsion coefficient |
| Age | Month | 18.54 | 1.98 | 18.50 | 0.61 | 18.68 | 1.62 | 18.65 | 0.91 |
| Height | Cm | 168.51 | 1.63 | 168.50 | 0.51 | 169.84 | 1.98 | 169.85 | 0.51 |
| Weight | kgm | 71.21 | 2.11 | 71.20 | 0.69 | 72.65 | 2.11 | 72.60 | 0.32 |
| IQ | Degree | 73.87 | 2.79 | 73.85 | 0.25 | 73.44 | 1.65 | 73.40 | 0.87 |
| Fitness | S | 12.58 | 1.51 | 12.55 | 0.62 | 12.98 | 0.68 | 12.95 | 1.98 |
| Compatibility | S | 4.52 | 0.65 | 4.50 | 0.87 | 4.57 | 0.51 | 4.55 | 0.62 |
| Flexibility | Cm | 3.51 | 0.98 | 3.50 | 0.98 | 3.49 | 0.26 | 3.45 | 0.47 |
| The muscular capacity of the arms | M | 6.64 | 0.19 | 6.60 | 0.74- | 6.69 | 0.87 | 6.65 | 0.47- |
| The muscular capacity of the feet | cm | 28.94 | 2.11 | 28.90 | 0.62 | 28.54 | 0.69 | 28.50 | 0.62 |
| Defensive and forward-looking and backward | S | 25.11 | 0.17 | 25.10 | 0.28 | 25.10 | 0.28 | 25.00 | 0.28 |
| Move the defensive and the opposing on twice and start to attack the 40 m sniper | S | 22.15 | 0.22 | 22.10 | 0.14 | 22.18 | 0.14 | 28.10 | 0.14 |
| Various defensive and opposing moves | S | 9.10 | 0.31 | 9.00 | 0.63 | 9.12 | 0.10 | 9.10 | 0.032 |

It is clear from the previous table (1) that the values of the torsion coefficients of the control and experimental groups ranged between (1.98 to 0.47), ie, they were limited to (± 3) indicating the moderation of the distribution of the students in the variables under consideration.

Parity Sample Search:

After checking that the research sample represented a

moderate society in the variables under consideration, and to verify the parity of the two groups, the researcher calculated the arithmetic mean, the standard deviation and the T test to find the significance of the differences between them in the variables under study that may have an effect on the experimental variable IQ - Special Fitness - Skill Performance) This is illustrated in Table (2).

Table (2)

Significance of statistical differences between experimental and control groups in each Growth rates, intelligence, physical variables, and skill level in question N = 1 n = 30

| Variables | measuring unit | Control group | | The experimental group | | Value t |
|---|----------------|---------------|------|------------------------|------|---------|
| | | M | E | M | E | |
| Age | Month | 18.54 | 1.98 | 18.68 | 1.62 | 0.21 |
| Height | Cm | 168.51 | 1.63 | 169.84 | 1.98 | 0.65 |
| Weight | kgm | 71.21 | 2.11 | 72.65 | 2.11 | 0.85 |
| IQ | Degree | 73.87 | 2.79 | 73.44 | 1.65 | 0.36 |
| Fitness | S | 12.58 | 1.51 | 12.98 | 0.68 | 0.22 |
| Compatibility | S | 4.52 | 0.65 | 4.57 | 0.51 | 0.58 |
| Flexibility | Cm | 3.51 | 0.98 | 3.49 | 0.26 | 0.41 |
| The muscular capacity of the arms | M | 6.64 | 0.19 | 6.69 | 0.87 | 0.21 |
| The muscular capacity of the feet | cm | 28.94 | 2.11 | 28.54 | 0.69 | 0.87 |
| Defensive and forward-looking and backward | S | 25.10 | 0.28 | 25.17 | 0.14 | 0.98 |
| Move the defensive and the interview on twice and start to attack the 40 m sniper | S | 22.18 | 0.14 | 22.60 | 0.24 | 0.25 |
| Various defensive and opposing moves | S | 9.12 | 0.10 | 9.17 | 0.32 | 0.41 |

The value "T" is a tabular at the level of 0.05 = 1.671

It is clear from Table (2) that there are no statistically significant differences between the experimental and control groups in each of the variables of growth, intelligence, and physical and skill variables under study. All calculated values are less than the tabular value at the level of 0, 05)

indicating their equivalence in those variables.

Data collection methods:

First: Hardware and tools.

Second: Tests (IQ test - Physical tests - Technical tests)

Third: the method of learning used (constructive learning)

First: Hardware and tools.

- Resist meter device to measure length in centimeters - 4 hours stop
- Medical balance 5. Expert consultation form
- measuring tape 6 - legal handball field.

Second: Physical Tests: Attachment (2)

- 10×4 shuttle run test to measure fitness level.
- Digital circuit testing to measure compatibility level.
- An onyx test is used to measure flexibility.
- Test the throwing of the medical ball to a distance to measure the muscle strength of the arms.
- vertical jump test of stability to measure the muscular capacity of the two men.

Third: Technical tests

- defensive and forward-looking and backward.
- The defensive move and the interview on twice and the start of the 40-m.
- Various defensive and countermeasures.

Numbers for the experiment :

- Teaching steps in the form of constructive learning

The experimental group studied the constructional learning model based on the steps of the scientific models as follows:

- .Divide the students into six groups within the experimental group. Each group consists of five female students, a group leader, a group registrar, three female students, and participants in the group's activities.
- .In this step, the researcher begins a dialogue with her students about the concept to be learned and the previous concepts learned by the student, which have to do with the concept to be learned and call this stage the stage of advocacy, which calls the researcher students to learn a new concept.
- After this step, the researcher begins to ask questions about the concept to identify what the students have information about the concept to be learned in order to take the first impression on the students about the information and activities that students must

implement to get to know the concept well.

-Beginning the exploration phase, ie exploration of the concept through the implementation of the students of the activities listed on the basis of the summary material, -which is accompanied by the study plan and then record the results of activities in the working paper in preparation for the start of the dialogue session.

- At this stage, which is called the stage of interpretations, it is expected that the students will be able to develop explanations or solutions appropriate to the position contained in the suitability and performance of the activities contained in the worksheet in all seriousness and activity, and is expected to be able to students also to develop appropriate solutions to the position that explain them Meaning the concept they learn.

- This stage is the stage of taking action in which the assessment and learning of students by giving them the questions that revolve around the concept you learned and also distinguish examples and attitudes that agree the nature of this concept.

- In the final stage of the lesson, the concept is presented in such a way as to clarify the concept given to the students and the main and secondary relations of the concept associated with it, in order to make sure that it is learned and established.

- Giving students the duties of another subject.

Program Contents:

The researcher prepared (12) educational units using the constructional learning model. The following is the educational content of each unit of the program:

| | |
|--|---|
| The initial and second units | To teach the skill of defensive and forward and backward movement |
| The third and fourth educational units | . To teach and master the skill of defensive and forward and backward moves |
| The fifth and sixth units | Learn the skill of moving the |

| | |
|--|--|
| | defense and opposing twice and starting for the 40m sniper attack |
| The seventh and eighth educational units | Teach and master the skill of moving the defense and opposing twice and starting for the 40 m. |
| The ninth and tenth units | Teaching the skill of various defensive and opposing moves |
| 11th and 12th Education Unit | Teaching the skill of various defensive and opposing moves |

View and discuss the results

Table (3)
Indications of the differences between the mean and premeasurements of the experimental group In the level of some defense skills under consideration N = 30

| Variables | measuring unit | Pre measuring | | Post measuring | | Differences between the two averages | Improvement rate | Value t | Level of significance |
|--|----------------|---------------|------|----------------|------|--------------------------------------|------------------|---------|-----------------------|
| | | M | E | M | E | | | | |
| Defensive and forward-looking and backward | S | 25.10 | 0.28 | 21.18 | 0.52 | 3.92 | 18.50% | 3.51 | indication |
| Move the defensive and the opposing w on twice and start to attack the 40 m sniper | S | 22.18 | 0.14 | 18.62 | 0.14 | 3.56 | 19.11% | 3.22 | indication |
| Various defensive and opposing moves | S | 9.12 | 0.10 | 8.10 | 0.11 | 1.02 | 12.59% | 3.87 | indication |

Tabular value at the significance level (0.05) = 1.666

Table (3) shows statistically significant differences between the averages of the pre and post

measurements at the level of some defense skills in the experimental group. The value of the table is greater than the

value of (0.05) in favor of the post measurement.

The researcher attributes this positive impact to the use of constructional learning as a learning method based on understanding through the intellectual participation of learners, taking into account the individual differences in application.

It also provides feedback as well as suitable for all ages and levels and gives a wide scope for the development of knowledge through its four stages: Interpretations and solutions, and finally the decision-making stage, which had the greatest impact in increasing the skill level of the defense skills of students.

This is in line with what Aisha Al-Fateh (2005) 10 and Amr Abdullah (2004) [11] suggest that this method affects the physical and skill level of the skills taught, as its impact on the physical level leads to the effect on the special skill level

This is because of the interaction of the students and their challenge to themselves and discover solutions and

applications to achieve optimal performance with the guidance of the education to correct errors and activate the course of learning process for the race under study.

Blanche Salama and Nelly Ramzi (2009) 2, as well as Nabil Fadl and Fatima Razan (2000) (20) indicate that this strategy helps to stimulate students and increase their desire to work and regularity and motivate them to build their concepts and knowledge to know the correct performance than it had The use of educational stages through the method of constructive learning helps to focus on different parts of the skill.

They also stressed the link between science and culture, which is an important stage of learning in physical education and through the course of the lesson even Had there been a difference in the area of Durr Or subject line, the course of the lesson one note with great overlap and interaction between science and culture.

Table (4)

Indication of the differences between the mean and premeasures of the control group In the level of some defense skills under consideration N = 30

| Variables | measuring unit | Pre measuring | | Post measuring | | Differences between the two averages | Improvement rate | Value t | Level of significance |
|--|----------------|---------------|------|----------------|------|--------------------------------------|------------------|---------|-----------------------|
| | | M | E | M | E | | | | |
| Defensive and forward-looking and backward | S | 25.17 | 0.14 | 23.10 | 0.29 | 2.07 | 8.96% | 2.18 | indication |
| Move the defensive and the opposing w on twice and start to attack the 40 m sniper | S | 22.60 | 0.24 | 20.16 | 0.32 | 2.44 | 12.10% | 2.62 | indication |
| Various defensive and opposing moves | S | 9.17 | 0.32 | 8.65 | 0.74 | 0.52 | 6.01% | 2.87 | indication |

Tabular value at the significance level (0.05) = 1.666

Table (4) shows statistically significant differences between the averages of the pre and post measurements in the level of some defense skills in the students of the control group, where the value of (T) is greater than the value calculated (0.05). In the handball of students of the third division of the Faculty of Physical Education,

Helwan University in favor of dimension measurements. The researcher attributed this to the regularity of students in the control group in the presence of practical lectures regularly.

The researcher attributes this progress to the fact that the traditional method

(explanation and performance of the model) requires the teacher to explain and perform the good model of the skill of the learner,

Which helped the students to understand the sequence of the dynamics of those skills where the traditional method, which depends on the verbal explanation of defensive skills in handball and repetition of the learner with The teacher corrected the mistakes of the students during the learning process. All this provided a good opportunity for students to learn well and that the training of students on those skills raise the level of performance.

Kamal Zeitoun (2002) (18) points out that in order for the teacher to push his students to learn, he must use many different methods and methods, which requires the teacher to be fully familiar with the different methods and methods of teaching and how the learning of the students and how affect the methods and methods Used to quickly achieve the goal of the teaching and learning process. (21:14)

Thomas (2005) adds that it is important for learners to be familiar with the latest methods and techniques that enable them to communicate knowledge to learners and create better areas for

improving the teaching and learning process.

Hence the importance of choosing the appropriate teaching method to achieve the desired goal. Recognizing the nature, components and variables of different educational situations (37:30)

The researcher attributed this progress to the control group to the regularity and continuing practice and learning with the teacher to provide a series of exercises ranging from easy to hard and practice of the learner gave the learner a good opportunity to learn the skills in question, which has a positive impact on the efficiency of skilled performance.

**Table (5)
The significance of the differences between the two dimensions in the experimental and control groups in the level of some defense skills in handball N = 60**

| Variables | measuring unit | The experimental group | | Control group | | Value t | Level of significance |
|--|----------------|------------------------|------|---------------|------|---------|-----------------------|
| | | M | E | M | E | | |
| Defensive and forward-looking and backward | S | 21.18 | 0.52 | 23.10 | 0.29 | 3.15 | indication |
| Move the defensive and the opposing w on twice and start to attack the 40 m sniper | S | 18.62 | 0.14 | 20.16 | 0.32 | 3.84 | indication |
| Various defensive and opposing moves | S | 8.10 | 0.11 | 8.65 | 0.74 | 3.26 | indication |

The value "T" is a tabular at the level of $0.05 = 1.671$

Table (5) shows differences between the two statistically significant dimensions of the experimental

and control groups at the level of some defense skills in handball. The value of the t-table value is greater than the value calculated from the significance level (0.05)

The researcher attributes the progress in the level of skills in the experimental group (constructional learning) to the structural strategy of the skill division according to the stages of (advocacy, exploration, proposing solutions, and taking action). This is done in the form of a dynamic task carried out by the student at each stage. Stages, with the researcher throwing a set of questions that are compatible with each stage in the form of excuses to reach the optimal form of performance and this is within the framework of discussion and dialogue between students and their colleagues and teachers.

This is consistent with the results of Aisha Mohammed (2005) (13), Nasima Ibrahim (2005) (21), which proved the effectiveness of constructive learning in learning some of the kinetic skills of the type of activity selected.

The researcher explains the superiority of the experimental group on the control group in the defense skills in handball in what is characterized by constructive learning and the four stages on which it is based, and you see that this method is developed in the process of education for the skills of motor in terms of increasing the time available for application,

And includes through The four stages of the process are self-directed discovery, self-application and problem solving, which are indirect methods of teaching, which depend on the individual's knowledge acquisition through his experience. It is also suitable for all ages and levels. Nologia education at the invitation stage.

Sawz (2003) (29) Muhammad Al-Washahi (2000) (2) agreed that learning through exploration, one of the stages of constructive learning, instructs the learner to use high-level thinking skills to discover correct technical performance. To the learned skill, which leads to the stability of information, and creates an atmosphere of

competition and challenge to stimulate the enthusiasm of the learner to develop the rate and level of performance.

Which satisfies the third hypothesis, which states that "there are statistically significant differences between the averages of preand post measurements in the level of learning some defensive skills in handball and for the experimental research group".

Conclusions:

1- The method of constructive learning has a positive impact in the teaching of defense skills in handball.

2- The method of constructive learning has a positive impact on the use of model and explanation method only.

Recommendations:

1- the use of constructive learning method because of its positive impact on the improvement of skill level of female handball students

2- Conducting studies and other research used to identify the effect of using constructive learning method on handball skills not covered in this study.

3- Pay attention to the strategy of learning B according to each sport specialized.

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