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The effect of combined exercises with digital communication technology in developing forms of correction and deception for junior specialists in handball

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Abstract---Handball players aged 13–15 years in the Middle Euphrates belonging to the Central Handball Federation were distributed according to the specialised centers in the governorates (Karbala, Babylon, and Qadisiyah), which numbered 90 players. The specialised centers affiliated to Qadisiyah Governorate numbered thirty players, and the number of players of the studied age was twenty-two players. The renewal in the methods of communication and presentation of skills in advance and the possibility of reviewing them during performance and freely left to the learner contributed positively to the development of the combinatorial capabilities and the studied skills; and that the process of blending in the exercises prepared by the researcher between the combinatorial abilities and the studied skills contributed greatly to the development of the combinatorial capabilities and the studied skills; and that accreditation in developing skills for young ages in combination with combinatorial abilities, it is the one that will have a great impact in the future as it depends on a very high level.

Keywords---compound exercises, digital communication technology, forms of shooting and deception, handball.

Introduction

The importance of the research lies in the complex exercises in which the player's work is coordinated and arranged in the integration of learning basic skills, which will be a digital communication means that helps the learner to understand the motor performance mixed between abilities and skills, which in turn reflects positively on learning the skills well and also on the possibility of performing them in different situations during matches, especially with players of specialised centers like handball.(Miles et al 2012)

Research problem

The researcher and the supervising lady are interested in the game of handball, and after following up on some of the junior championship matches that were held in Karbala and watching some training units in the Specialized Handball Center in Kufa, the researcher noticed the lack of use of compound exercises in the early stages of learning and also through a question showing the lack of use of modern means of communication for the purpose of learning in the educational units and to explain the exercises in an interactive manner, as well as the lack of focus on teaching the skill of deception with these groups.

Therefore, the researcher thought of answering the following question:

Is the use of digital communication reflected in how handball players in specialised centers learn to shoot and trick?

Aims of research

Preparing complex exercises for some forms of shooting and deception for players of specialised centres in handball; preparing a means of communication with digital communication technology to develop some harmonic capabilities and forms of correction and deception for players of specialised centres in handball; and identifying the impact of complex exercises with digital communication technology in developing forms of correction and deception for players of specialised centres in handball and to identify the effect of the preference for the post-tests of the experimental and control groups.(Brusseau et al 2018)

The practical part

The research community was determined by the players of specialised handball centres at ages (13–15) years in the middle Euphrates of the Central Handball Federation, distributed according to the specialised centres in the governorates (Karbala, Babel, and Qadisiyah), which numbered (90) players. The sample must be carefully chosen as it is part of the research community, which is a sub group of the research community that represents the best-represented elements of the community so that the results of that sample can be generalised to the entire community, as the research sample was chosen in a random way (the lottery). It was made up of 30 players from specialised centres in the Qadisiyah Governorate. There were 22 players in the studied age group, but 2 of them couldn't be goalkeepers. (Örücü et al 2020)

The homogeneity of the research sample

In order to reach a single level for the research sample and to avoid indicators that may affect the results of the research in terms of the individual differences that exist between the players for the specialised centers, the researcher conducted a homogeneity procedure before starting to implement the compound qualitative exercises in the variables related to morphological measurements (height, mass, age, and educational age).

Field Research Procedures

Basic offensive handball skills:

- 1-Aiming.
- 2-Deception.

Developing tests for basic offensive handball skills for research

After determining the basic offensive skills related to the subject of the research, the sources, references, and studies similar to these tests were relied upon, although these tests are codified and applied to the same game. 12–15) -General Handball. (Jayal et al 2018)

Handball research tests for basic offensive skills:

First test: shooting:

Test name: Technical performance of high jump shooting skills.

The purpose of the test: is to evaluate the technical performance of the shooting skill from a high jump.

Used equipment:

- Court for handball
- Legal handballs (8)
- a pre-made calendar form.

Performance Specifications:

The player being tested does the shooting skill by jumping high from the given area (9 m), and the tester gives the player three chances to do the skill in a row.

Registration method: Evaluators evaluate the attempts for each tested player, as each rating gives three marks to each tested player according to the chosen division as follows:

- (3) degrees in the preparatory section
- The main section has four (4) degrees.
- Section three (3) marks.

Note that the total score for the assessment is (10) degrees. After that, the arithmetic mean of the three degrees is used to find the best score for each assessment. (Marcora et al 2009)

The second test:

Test name: Technical performance of shooting from jumping forward.

The purpose of the test: is to evaluate the technical performance of jumping forward.

Used equipment:

- Court for handball
- Legal handballs (8).
- a pre-prepared calendar form.

Performance Specifications:

The player being tested takes the shot by jumping forward from the area marked by (7 m). The player is given three chances to do the skill correctly.

Registration method: Each lab student's attempts are graded by two assessors. Each assessor gives each test player three marks based on the division they choose.

- (3) degrees in the preparatory section
- The main section has four (4) degrees.
- Section three (3) marks.

Note that the total score for the assessment is (10) degrees. After that, the arithmetic mean of the three degrees is used to find the best score for each assessment. (Putnam et al 2001)

The third test:

Test name: Deception with the ball and shooting.

The purpose of the test: is to assess deception skill performance.

Used equipment:

- handball court.
- Defending player
- Signs.
- Stop Watching.
- Camera.

Performance method:

The defending player stands on the seven-meter line and the testers stand in front of him to receive the ball from the colleague on the side. If the player is with the left or right arm, he makes a deception disguised by handling to the side and then moving against the deception of the hand by tamping the ball once and moving the ball inside and shooting at the goal from six meters. (Blanchard et al 1995)

Registration method

The assessment of the form is recorded by three arbitrators to evaluate the performance of the skill of deception, so that each referee records the appropriate score for each tested player according to the divisions built into the score form.

- Approximately (5) marks for the run and preparatory section.
- Correctly receiving the ball from the coach (5) degrees.
- Jumping and getting ready to shoot five degrees.
- Stability in the air and aiming at five degrees.

Fourth test:

Test name: Technical performance of the skill of simple deception.

The purpose of the test: is to evaluate the technical performance of simple deception by experts.

Used equipment:

- Sony camera
- Number eight (8) in handball
- Defender (negative).
- Court for handball

Performance Specifications

The distance between the defender and the tested player is determined by 1.50 m, and the tested player performs a simple and well-known deception by taking three steps, the first against the shooting arm, the other towards the shooting arm, and the last to complete the technical performance. During this performance, the tested player is photographed and presented to three experts and given to the laboratory three efforts.

Registration method: The laboratory performance in the three attempts is evaluated by experts, bearing in mind that the final evaluation score is (10 degrees), and the degree division is as follows:

- (4) grades for the preparatory section
- The main part (4 marks).
- Final part (2 marks).

Note that the total score for the assessment is (10) degrees. After that, the arithmetic mean of the three degrees is used to find the best score for each assessment.

Survey experience

The researcher, with the help of the assistant work team, carried out the exploratory experiment in Qadisiyah Governorate to apply the tests of compatibility abilities and basic offensive skills to the members of the exploratory sample of six players in order to know several things related to the tests used.

- 1) Ensure the clarity of the tests of the sample.
- 2) Recognize the sample's understanding of the instructions of the tests.
- 3) The time required to take the tests
- 4) The extent to which the sample interacts with the tests and the suitability of the tests to their location
- 5) Identifying the adequacy of the assistant work team to conduct the tests.
- 6) Knowing the conditions of applying the tests and the difficulties that accompany them, and the goals were achieved without any problems.

Scientific foundations:

Test validity

Test honesty is one of the most important things that a good test should have, and it means "the quality of the test as a tool to measure what it was meant to measure."

Test stability

In order to extract the coefficient of stability of tests for combinatory abilities and basic offensive skills, the principle of the fixed test must be applied, "which gives close results or the same results if applied more than once in similar conditions." The researcher used this to calculate the reliability coefficient. b) Test and retest method) with an interval between the first and second test of seven days, on the same sample members and under the same conditions as the first test.

Main experience

Pre-test:

The researcher gave the people in the research sample tests in Al-Qadisiyah governorate to see if they knew the basics of handball (like how to shoot and trick).

Qualitative exercises that are compounded

Compound qualitative exercises were used in the main part of the learning unit for the experimental group. These exercises were used by the researcher.

Post-test

After completing the qualitative exercises, the researcher re-applied the basic offensive skills tests in Al-Qadisiyah Governorate, taking into account the same conditions, conditions, and instructions used in the pre-test as much as possible.

Statistical methods used

The statistical program (spss) was used.

Results

Presentation and analysis of the results of the pre and post- tests of the control group for the basic offensive skills of handball

Table (1)

It shows the arithmetic means, standard deviations, the calculated (t) value, the (sig) value, and the significance of the difference for the pre and post- tests of the control group for the research variables

Statistical processing	The unit of measurement	Pre-test		Post-test		(t)	(Sig)	indication
skills		Mean	Standard deviation	Mean	Standard deviation			
Shooting from stability	second	3.90	0.74	5.10	0.32	-4.81	0.00	Significant
Aiming from jumping high	second	5.30	0.82	6.60	0.70	3.88	0.00	Significant
Aiming from jumping forward	second	6.30	0.82	7.00	0.94	2.66	0.03	Significant
simple deception	second	4.50	0.53	6.30	0.48	9.00	0.00	Significant
Complex deception	second	9.60	0.84	13.20	0.79	-9.00	0.00	Significant

Discussing the results of the pre and post-tests of the control group for the basic offensive skills

Through the results presented and analysed in the previous two tables, it became clear that there are significant differences between the tribal and remote tests and in favour of the post test for all basic offensive skills. Despite the experimental group being subjected to qualitative exercises prepared by the researcher, this does not negate the development of the control group and the researcher attributes this. The evolution of the control group was due to the use of regular exercises in the correct manner set by the coach, in addition to the regularity of the players in the educational units and the continuation without interruption during the period of the researcher's application of qualitative exercises. As the researcher attributes, the use of a sufficient number of repetitions of the exercises in the learning process leads to a significant improvement in the performance of the players, and as the researcher points out, "I mean the enhanced repetition through which we notice a gradual improvement in the player's performance as a result of the reinforcement that occurs as a result of internal stimuli that provide the player with the knowledge to achieve the correct performance" ⁽¹⁾.

Table (2)

It shows the arithmetic means, standard deviations, the calculated (t) value, the (sig) value, and the significance of the difference for the pre and post-tests of the experimental group for the research variables

Statistical processing skills	The unit of measurement	Pre-test		Post-test		(t)	(Sig)	indication
		Mean	Standard deviation	Mean	Standard deviation			
Shooting from the high jump	once /second	5.20	0.79	8.30	0.67	-8.91	0.00	Significant
Shooting from stability	second	3.80	0.63	6.50	0.53	-12.65	0.00	Significant
Simple deception	degree	4.30	0.48	7.80	0.42	-12.00	0.00	Significant
Attempting to move forward	degree	6.20	0.79	8.90	0.32	-10.37	0.00	ant
Complex deception	degree	9.40	0.70	14.70	0.48	-34.70	0.00	Significant

Talking about the results of the basic offensive skills pre- and post-tests for the experimental group

Through the results that were presented and analysed in the previous two tables, it became clear that the development results matched what the researcher expected in his hypothesis. The effectiveness of the compound qualitative exercises used by the researcher, which were prepared and applied on the members of the experimental research sample according to its own scientific basis, whose exercises included and matched them with the basic offensive skills of handball.

In addition, the exercises prepared by the researcher are characterised by composition, diversification, and continuous change throughout the period of their application in the learning units, as well as the use of the means and tools

used in the application of these exercises, as they worked to increase the desire and excitement of the players for these exercises, and this is what (Ahmed Amin Fawzi) indicated to him: "The diversity in the tools and its exercises, all of this would excite the players and increase their motivation towards progress and elevation in the athletic level" (1)." It is essential that the player has a level of motor abilities to assist in the development of basic skills (2). Presentation and analysis of the results of the tribal and remote tests of the basic offensive skills in handball (handling and receiving, clapping, shooting, and trickery) for the experimental group.

Table (3)

It shows the arithmetic means, standard deviations, the calculated (t) value for the independent samples, the calculated (sig) value and the significance of the difference for the dimensional post-tests of the two experimental and control groups for the research variables (handling and receiving, tamping, correction, deception)

Statistical processing	The unit of measurement	control group		experimental group		(t)	(Sig)	indication
skills		Mean	Standard deviation	Mean	Standard deviation			
Shooting from the high jump	once /second	6.60	0.70	8.30	0.67	-5.53	0.00	Significant
Shooting from stability	second	5.10	0.32	6.50	0.53	-7.20	0.00	Significant
Simple deception	degree	6.30	0.48	7.80	0.42	-7.40	0.00	Significant
Attempting to move forward	degree	7.00	0.94	8.90	0.32	-6.04	0.00	ant
Complex deception	degree	13.20	0.79	14.70	0.48	-5.13	0.00	Significant

Discussing the results of the post-tests for the two control groups and the experimental group for the basic offensive skills of handball

The interest of the research sample at the age of (13–15) is one of the best age groups that allows the development of harmonious abilities, which depends on several basic principles that are affected and affect the level of sports performance strengthening the will factor of the player, and this is what comes through the sources that show the importance of combinatory capabilities. He (Raed Abdel Amir) adds, "The rise in harmonic abilities has a positive impact on the player's psychological and moral condition, as it leads to an increase and development of his will factor in a way that makes him able to move on the field." The researcher believes that the experimental group outperformed the control group in the basic offensive skills of handball, and the researcher attributed this to the quality of the exercises that are interconnected with each other in terms of giving each ability with one of the skills studied and in harmony with the possibility and ability of the players to reduce the The kinetic paths do not match performance, and the researcher agrees with what Khaled Hamouda and Ashraf Kamel asserted: "You begin and train young people at an age that allows the maximum development of their abilities, and the stage of young people (12–9) years is one of the most appropriate stages." "Dental learning for motor learning. (Manley et al 2012)

Conclusion

Keeping pace with the development in digital communication between the learner and the teacher and preparing the learner for the educational unit greatly affected the development of harmonious abilities and studied skills, and that the renewal in communication methods and presentation of skills in advance and the possibility of reviewing them during performance and freely left to the learner contributed positively to the development of compatibility capabilities and studied skills, and that the process of blending in the exercises prepared by the researcher between the combinatorial abilities and the studied skills contributed greatly to the development of the combinatorial abilities and the studied skills, and that relying on the development of skills for young ages in combination with the combinatorial abilities is the one that will have a great impact in the future as it depends on performance at a very high level. (Marcora et al 2009)

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