

The Effect of Skilful Visual Exercises in the Development of Motor Perception and Preparation Skill in Volleyball

Hamida Obaid Abdul Amir¹, Baida Abd Ali Kahdim Sebti²

¹Assistant Prof. Dr., ²Assistant Lecturer, University of Kufa/Faculty of Education for Girls / Department of Physical Education and Sports Sciences / IRAQ

Abstract

Identify the effect of using the aid in developing the perception of the motor sense and the skill of preparing in volleyball. As for the research assumptions, the exercises (visual-skill) using auxiliary means affected the development of sensory-motor perception and the exercises (visual-skill) with the auxiliary means affected the development of the most important basic skills in volleyball. As for the practical part, the researcher used the experimental method to suit the research problem, and the research sample was female students of the College of Physical Education and Sports Sciences / College of Education for Girls / University of Kufa in Volleyball and their number (24) players for the year 2019-2020 AD and they were randomly selected, and three students were excluded In order to conduct the exploratory experiments, homogeneity and parity were conducted for them, and then the researcher distributed forms for the perception of movement and the skill of preparing for volleyball and the suitability for conducting the research and presented it to the volleyball experts and then conducting the pre-tests and after applying visual skills exercises to the research sample within the main section of the training curriculum for a period of (6) 3 weeks, three units per week, to be (18) training units, then the researcher conducted the post-tests under the same conditions in which the pre-tests were conducted, in addition to using the appropriate statistical means to classify the data obtained. The researcher presented the results, analyzed and discussed them after being statistically processed, and then presented the data in tables and graphs, as the results showed statistically significant differences between the pre and post-test of the research sample and this is what fulfils the research hypothesis. Among the most important conclusions: The researched visual skills exercises have a positive effect by using innovative methods (educational - training) in developing the perception of a kinesthetic sense of volleyball for the research sample.

Key words: *visual-skill exercises, motor perception, volleyball*

Introduction

The importance of this study emerges through the exercises used and exciting for sensory-kinesthetic perception by using the manufactured and varied method to develop sensory perception and preparation skill with volleyball with the ball. The research problem was: so that the learning process takes place on a sound scientific basis and through the experience of the field researcher in The field of volleyball and being a former player and current trainer in the Ministry of Youth and Sports decided to use an innovative manufactured method that aims to shorten the time and accelerate the process of training, excitement and excitement in developing the skill of numbers and their optimal performance, and due

to the weakness of female students in this skill and the lack of use of assistive devices,⁽¹⁾ specially manufactured To restrict and narrow the training process, hence the problem of researching the preparation of exercises that contain visual-skill stimuli using an innovative aid in the development of sensory-kinesthetic volleyball. The objectives of the research were: to manufacture an educational aid to develop sensory-motor perception and preparation skill in volleyball, to prepare (visual-skill) exercises to develop sensory-motor perception and to develop volleyball preparation skills. As for the research hypotheses: Exercises (visual-skill) with the aid affected the development of sensory-motor perception. And exercises (visual-skill) with the aid affect developing volleyball preparation skills. The scientific

part includes the research method: The nature of the problem determines the method used, so the researcher used the experimental method by designing (the two equivalent groups) with pre and post-tests, which is “the closest and most sincere to solve many scientific problems practically and theoretically, and the research community and its sample were defined: The research community represented by the female students of the Department of Physical Education and Sports Sciences in the College of Education for Girls / University of Kufa / The female students of the college’s selection for the academic year 2019-2020 AD were selected by a simple random method, as the research sample included 24 female students, including the experimental group (12) female students and the control group (12) Student.⁽²⁾

Tests used in research:

First: The educational method for developing skilful visual perception:

A half-hexagonal shape was made of compressed panels with an appropriate rebound to the ball, similar to a wall. This half-hexagonal shape has obtuse angles measuring about (120) °, and these wooden panels have dimensions (1.5 meters x 1.5 meters) the size of the front facing plate For the student, as for the sides, the size of the wooden panels is (1 x 1.5 meters), and these wooden panels are supported from the back with an iron support and the wooden panels are fixed on it and also connected with a movable base with wheels that can be closed and moved, and the height of the wooden panels from the ground is 1 meter in addition To that, each plate contains light and each plate has a specific light that differs from the light of the other panel, so when the student begins to scroll, whether it is from the bottom or top with different sides, we turn on the electrical circuit, which is an electrical circuit connected to an operating switch via the Remont, and any of the lights are in a random manner and the time in which the light remains on can be controlled and the time can be reduced and it can be increased according to the performance of the skill student. It is considered as the development of your visual management and focus on the direction of performance, whether it is in front of me or to one side and also as a feed A complimentary review of skill performance, and this method works to develop skills and visual performance simultaneously.⁽³⁾

Second: Tests for sensory-motor perception:

1- The feeling of jumping distance:

One of the most famous examples of these tests is the Scott test, as it aims to measure the ability to sense the distance of the jump forward, as the player’s achievement of the required distance indicates the sense of movement and this test is performed without using the sense of sight.

This test is valid for both sexes from the age of ten years until the end of university education.

Tools: eye patch, chalk, tape measure.

Performance specifications: Draw two parallel lines on the ground so that the distance between them is (58.8 cm) and the tester stands on the starting line, looks at the distance between the two lines for a period of (5 seconds), then blindfolds his eyes, and jumps from the starting line to the front so that his heels touch the ground at the finish line.

Conditions: The distance between the finish line and the end of the player’s hurdles is recorded as errors of judgment, which indicate a lack of perceptual ability of distance. Two attempts are given to the tester, and the total score of the test player is the average of the two attempts.⁽⁴⁾

2- The feel of throwing the ball :

Two lines are drawn with a distance of 127 cm between them. The player stands before the starting line and throws the ball blindfolded after giving him (5) seconds to estimate the distance between him and the finish line (the one to be thrown at). The distance is recorded negatively or positively (before or after the line).

Third: Test the accuracy of the performance of the preparation skill in volleyball

The objective of the test: to measure the accuracy of the preparation skill.

Used tools

Basketball pillar, (5) legal volleyballs, a pre-prepared accuracy evaluation form.

Method of performance

The test student stands facing the basket at the free-throw line on the circular line, raises the ball to the top, then passes it to the basket, trying to pass it inside the basket, as shown in Figure (7), each student is given (5) attempts.

Scoring - the ball away from the basket is zero.

- The ball away from the basketball ring is (2) points.
- Touching the ball to the ring without hitting (3) points.
- Passing the ball inside the ring (5) points.

* The maximum score for the test is (25).⁽⁵⁾

Pre-test:

The pre-test for the research sample was conducted on Tuesday (12/2/2020) at exactly ten o'clock in the morning. All variables were adjusted in terms of time, tools and devices, as well as the auxiliary work team, to be applied when conducting the (post-test), that is, after implementing the training curriculum. Conducting the tests on the playground of the College of Physical Education and Sports Sciences / College of Education for Girls / University of Kufa, as it is suitable for conducting the tests.

Application of the training program:

After completing the application of the pre-tests, the researcher applied the training curriculum on Sunday 19/2/2020 AD with (3) training educational units per week, and the last educational unit was completed on Sunday 7/4/2020.

Post-test

After completing the implementation of the educational training curriculum, the post-test was conducted for the research sample on Tuesday 10/4/2020 AD at exactly ten in the morning, taking into account the temporal and spatial conditions and means of the post-test, with the help of the auxiliary work team.

As for the main section of the training program, it reached (1260) minutes, at a rate of (77.77%), which includes (the theoretical part and the practical part), while the total time of the final section of the educational unit was (360) minutes, at a rate of (11.11%) of the total time of the program.

Statistical means

The researcher used the Statistical Package for Social Sciences (SPSS)

Sample homogeneity:

After the sample was divided into two groups in a random way, and to avoid influences that may affect the research results of the individual differences that exist among the students, and to reach a single and equal level for the sample, some variables that represent the specification of the sample were determined to ensure their consistency in those variables that are influential. In the experiment, which must be controlled, and this is why a statistical treatment was carried out using the torsion coefficient, and tables (1) show this, noting that the torsion coefficient in these variables is limited to (± 1) and therefore the sample is normally distributed as "whenever the values of the torsion coefficient are confined between (± 1) the sample was homogeneous.

Table (1) shows the variables, the mean values, the standard deviation, the model, and the value of the torsion coefficient for the control and experimental groups

Groups		variables	mean	Vein	Std. deviation	skewness
Experimental and control	1	Age / year	20,645	20	1,853	0,357
	2	Length / cm	160,375	160	5,274	0,063
	3	Weight / kg	61,783	56	8,984	0,624

Equivalence of the two research groups:

The researcher should form equal groups at least about the variables that are related to the research, and for the researcher to refer the difference between the results of the research, if any, to the independent factors, the researcher resorted to checking the equivalence

of the research groups, as it checks the equivalence between the two research groups using a test (C) And for the following variables: (perception, the kinesthetic, skill of numbers), and to verify the equivalence of the two research groups in the above variables. A (T) test was performed and Table (2) shows that.

Table (2): It shows the equivalence of the control and experimental groups in the tests

Variables	Control group		Experimental group		Computed T value	type indication
	mean	Std. deviation	mean	Std. deviation		
Preparation skill	3,583	0,792	3,916	0,514	1,221	significant
Perception, kinesthetic	4,833	6,264	4,666	6,184	0,065	significant

Presenting the results of the pre and post-tests for the tests of the control group for technical performance, accuracy, and sense-perception:

Table (3): It shows the arithmetic mean, standard deviations, and the calculated and tabular (T) value between the pre and post-tests of the control group

Variables	Pre-test		Post-test		Computed T value	type indication
	mean	Std. deviation	mean	Std. deviation		
The skill of preparing from the top	3,58	0,79	5,83	0,83	9	significant
Perception, kinesthetic	4,83	6,26	3,66	4,51	2,12	significant

Table4): It shows the arithmetic mean, standard deviations, and two (T) values calculated and tabular between the pre and post-tests of the experimental group tests.

the test Variables	Pre-test		Post-test		Computed T value	type indication
	mean	Std. deviation	mean	Std. deviation		
The skill of preparing from the top	3.91	0,51	6,83	0,71	12.74	significant
Perception, kinesthetic	4.66	6,18	0.66	1.66	2.42	significant

Table (5): It shows the arithmetic mean, standard deviations, and the two calculated and tabular (T) values between the control and experimental groups for the post-post tests.

Variables	Control group		Experimental group		Computed T value	type indication
	mean	Std. deviation	mean	Std. deviation		
The skill of preparing from the top	5,83	0,83	6,83	0,71	3,14	significant
Perception, kinesthetic	3.66	, 4.51	0.66	1.66	2.15	significant

Discuss the Results

Table (3, 4, 5) shows that there are significant differences between the pre and post-tests in technical performance, accuracy, sensory-motor perception, and preparation skill from above {and in favour of the post-tests of the experimental group. (6) This fulfils the research hypotheses and the researcher attributes these differences to the visual skills exercises used by the researcher from Through the innovative aid to focus exercises on the sense of sight and skill, as it is one of the important senses in the process of learning and training, as Mahmoud Abdel Mohsen believes that “vision is a basis for raising the energy of sports players, and its role is no less than the role of muscles, bones, respiratory system ... etc. The sense of sight has an important role in education and training, by presenting models to the learner and trainee so that he has a picture of the movement and tries to reach it. (7)

As for the results of the control group, significant differences appeared in favour of the post-tests, and these differences as a result of repetitions and practice led to a relative improvement in performance and accuracy, but with much lesser proportions than the experimental group, and the fact that the subject teacher used the traditional curriculum led to these significant differences for the control group.

The researcher also believes that the visual skills exercises used helped in developing the students’ sense-motor perception of the experimental group and determining the type of movements required to perform.

Zaki Muhammad Hassan agrees in this, as he believes that “the sense of sight has an important role in the process of skill performance. Through it, the player can know his position about the opponent. And determining the type of moves that he can perform, and the player perceives through this sense the movements of the opposing team and thus can take the appropriate position, and that these visual skills exercises have a direct effect on the development of the field of technical performance and accuracy as well as the perception of movement in addition to increasing the ability of students to interpret information And (Iván González) emphasizes, “The player’s possession of a wide field of vision is more able to interpret and perceive information and give the required movement response with high accuracy and quality.” (8)

The state of suspense, excitement, and regular training are among the basic factors that enable the sample to excel and excel, and the high level of their skill achievement and sense of kinesthetic perception, which leads to the implementation of the motor duty with high accuracy and efficiency. (9)

Conclusion

The results showed that there are statistically significant differences between the pre and post-test of the research sample, and this is what fulfils the research hypotheses. Among the most important conclusions: The researched visual skill exercises have a positive effect by using innovative methods (educational - training) in developing the perception of a kinesthetic sense of

volleyball for the research sample.

Financial Disclosure: There is no financial disclosure.

Conflict of Interest: None to declare.

Ethical Clearance: All experimental protocols were approved under the University of Kufa and all experiments were carried out in accordance with approved guidelines.

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