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## The effect of exercises by means of assistance in developing the technical performance of the skill of hitting the volleyball for students

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#### Abstrac

The first chapter included the introduction of the research and its importance, and the researcher dealt with the importance of basic skills and the role of aids in developing these skills. The technical performance of the overwhelming hitting skill for the students of the second stage in the College of Physical Education and Sports Sciences at Al-Mustansiriya University. As for the research objectives, they were:

- Preparing exercises using an aid to develop the technical performance of the skill of crushing volleyball for students.
- Identifying the effect of exercises by using an aid to develop the technical performance of the skill of hitting the volleyball for students.

#### As for the research hypothesis, it was

There are statistically significant differences between the results of the pre and post-tests of the
experimental group in the technical performance of the crushing skill of volleyball for students and in
favor of the post tests.

The second chapter included details of the research methodology and field procedures, as the researcher used the experimental method in the method of one experimental group with two pre and post-tests, and the research sample was chosen by the intentional method represented by students of the second stage in the College of Physical Education and Sports Sciences / Al-Mustansiriya University for the academic year 2018/2019 and adult Their number is (138) and they are distributed as follows (A-B-C-D-E). The researcher chose the research sample in a random way, and they are students of (B) division, whose number is (20) students, with a ratio of (14.50).

As for the third chapter, the extracted statistical results were presented in charts, with the analysis and discussion of those results according to the theoretical knowledge foundations based on scientific references.

## In the light of the experiment carried out by the researcher and the results achieved through tests and statistical methods, he reached the following conclusions:

- 1. The results achieved by the tests proved the validity of the educational exercises prepared by the researcher through the clear development of the overwhelming multiplication skill.
- 2. The use of the assistive method helped to increase the number of repetitions for one exercise, which was positively reflected in the development of the crushing hitting skill.
- 3. The auxiliary method had a great impact in reducing the effort exerted on the teacher through the development of the technical performance of the crushing skill.

#### As for the recommendations, they were:

- 1. Adopting the method to help teach the skill of overwhelming multiplication to give it good results.
- 2. The possibility of using the method to help develop other skills, such as the blocking skill.

Work on designing aids for other skills in order to reduce the effort on the shoulders of the teacher and develop the technical performance of the skills faster.

**Keywords:** Exercises utilizing assistance, technical performance of the skill of crushing hitting, students of the second stage

#### 1. Introduction

**1.1 Introduction to the research and its importance:** The basic skills in playing volleyball are the backbone for learning and developing this game, as it takes a long time to acquire it

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Faculty of Physical Education and Sport Sciences, Al-Mustansiriyah University, Iraq and needs a teaching program based on sound scientific foundations, so the audience working in the sports field seeks to build a new base for the individual in learning the basic skills of the game from Through the provision of auxiliary tools that facilitate the education process, as the use of educational aids helps to learn and develop motor skills and thus leads to building and developing the motor perception of the learner. Optimum performance. The accuracy of skillful performance is related to the educational experiences provided by the teaching aids that help in its development directly, with the diversity and modernity of the teaching aids. Shortening the time for each educational stage and used as preparatory exercises that facilitate the possibility of learning the r movements Based on these facts, the importance of the research emerged through the possibility of using an educational tool to help develop the technical performance of the skill of crushing volleyball to reach the skill to the best possible level among students of the second stage in the College of Physical Education and Sports Sciences.

#### 1.2 Research Problem

The game of volleyball is one of the most widespread sporting activities for its ease of performance, and in order for the learning process to take place on a sound scientific basis, an advanced educational method was used, which aims to shorten the learning time, accelerate the learning process, and build suspense in the lesson, due to the fact that the physical education lesson lacks the use of these means, and this Making the learning process narrow and restrictive in achieving the goals of the educational process, hence the research problem emerged in preparing exercises with an auxiliary educational method to develop the technical performance of the crushing skill of the second stage students in the College of Physical Education and Sports Sciences, Al-Mustansiriya University.

#### 1.3 Research objectives

- 1. Preparing exercises using aid to develop the technical performance of the volleyball crushing skill for students.
- 2. Identifying the effect of exercises by using aid to develop the technical performance of the crushing hitting skill in volleyball for students.

## 1.4 Imposing Research

1-4 There are statistically significant differences between the results of the pre and post-tests of the experimental group in the technical performance of the crushing skill of volleyball for students, in favor of the post tests.

#### 1.5 Research Areas

1-5-1 The human field: Students of the second stage in the College of Physical Education and Sports Sciences / Al-Mustansiriya University for the academic year 2018-2019.
1-5-2 Time Range for the period from 3/12/2018 to 11/3/2019

1-5-3 Spatial field: The closed hall in the College of Physical Education and Sports Sciences / Al-Mustansiriya University.

#### 2. Research methodology and field procedures 2.1 Research Methodology

The nature of the problem at hand is what determines the nature of the approach used, so the researcher used the experimental approach with the design of one experimental group with two pre and post-tests.

#### 2.2 Research Community

The research community was determined by the intentional method, which is represented by the students of the second stage in the College of Physical Education and Sports Sciences / Al-Mustansiriya University for the academic year 2018/2019, whose number is (138) and distributed as follows (A-B-C-D-E). The researcher chose. The sample of the research was conducted randomly, and they are (20) students from Division (B), with a ratio of (14.50), where the researcher excluded the students who failed and club players, and used (4) students for the purpose of the exploratory experiment.

#### 2.3 Homogeneity of the research sample

Before starting the implementation of the main experiment, and in order to control the variables that affect the accuracy of the research results, the researcher verified the homogeneity of the sample with the variables (height, weight, age) by finding the torsion coefficient, as shown in Table (1).

**Table 1:** It shows the values of the arithmetic mean, standard deviation, median, and torsion coefficient in the variables (height, weight, age) for the control and experimental groups

Statistical Parameters Variants	Measuring Unit	S	P+	Mediator	Torsion Modulus
Height	Poison	171.13	6.94	170.64	0.45
The Weight	KG	69.30	7.36	67.25	0.76
The Age	Month	258.50	0.80	21.47	0.71

Table (1) shows us that the value of the torsion coefficient ranges between (+\_1), which indicates the homogeneity of the sample.

#### 2.4 The means, tools and devices used

- Arabic and foreign scientific sources and references.
- Form for surveying the opinions of experts and specialists (\*).
- Technical Performance Evaluation Form for the Skills of Smashing and Blocking in Volleyball (\*\*).
- Tests and measurement.
- A legal volleyball court.
- A legal volleyball tied with (1) rubber.
- Electronic calculator (DELL).
- A medical scale for measuring weight.
- Sony video camera.
- An aid to develop the skills of smashing and blocking volleyball.

#### 2.5 Tests used

# **2.5.1** Evaluation of the technical performance test for the skill of crushing hitting in volleyball

In evaluating the technical performance of the volleyball crushing skill, the researcher relied on the form prepared by (Nahida Abd Zaid Al-Dulaimi) <sup>[6]</sup>, in which she relied on the apparent construction of the skill in the evaluation process, for three arbitrators \*\* for the purpose of evaluating her technical performance according to the aforementioned form.



#### 2.6 Exploratory experience

"It is a practical training to identify the negatives and positives that meet the researcher during the test to avoid them in the future" [2], so the exploratory experiment was conducted on 3/1/2019 in the closed sports hall at the College of Physical Education and Sports Sciences \ Al-Mustansiriya.

#### University on a sample consisting of (10) Students from the research community were randomly selected from outside the main research sample, The aim was to

- 1. Knowing the difficulties facing the researchers and developing appropriate solutions.
- Knowing the validity of the tests, devices and tools used, as well as knowing the time required to implement the vocabulary of one lesson.
- 3. Ensure the validity of the playing field and the tools used when applying the experiment.

## 2.7 Field Research Procedures 2.7.1 Pre-tests

The pre-tests for the technical performance of the skill of crushing hitting with volleyball were conducted for the research sample on Tuesday corresponding to 9/1/2019, noting that all the tests were conducted in the closed sports hall in the College of Physical Education at Al-Mustansiriya University and under the direct supervision of the teacher of volleyball with the researcher on the specified days. To study volleyball for the research group.

### 2.7.2 The main experience

After the completion of the implementation of the pre-tests, the implementation of the educational method exercises began on 16/1/2019, as the curriculum included (12) educational units, at a rate of (2) educational units per week, with a time of (30) minutes from the main section for one educational unit.

#### 2.7.3 Post-tests

After completing the application of the main experiment on 21/2/2019, the researcher conducted the post-tests on 22/2/2019. The tests were conducted under the same conditions in which the pre-tests were conducted.

#### 2-8 Statistical Methods

The researcher used the SPSS statistical package to obtain the search results.

#### 3. The results are presented, analyzed and discussed

- 3.1 Displaying and analyzing the results of the volleyball crushing skill
- 3.1.1 Presenting and analyzing the results of tests and the technical performance of the crushing skill of the experimental group

**Table 2:** It shows the values of the arithmetic mean, standard deviation, and the calculated and tabular t values in the pre and posttests of the technical performance of the crushing skill of the experimental group.

Statistical Parameters		Tribal		note	Calculated	Indication
The exams	-S	P	-S	P	T Value	Type
Technical performance						
test of the crushing	3.97	0.20	7.01	0.43	19.30	Moral
hitting skill						

\* The tabular value of (T) is (2.05) under the level of significance (0.05) and at a degree of freedom (24).

In the technical performance test, the arithmetic mean in the pre-test was (3.97) with a standard deviation of (0.20), while the arithmetic mean in the post-test was (7.01) with a standard deviation of (0.43), while the calculated (T) value was (19.30), It is greater than its tabular value of (2.05) at a degree of freedom (24) and below the level of significance (0.05), and this indicates that there is a significant difference between the pre and post-tests and in favor of the post-test.

#### 3.2 Discussing the results

The use of different heights of the suspended ball in the skill of crushing hitting, taking into account the heights of the students, as well as to master the skill at a lower height than the legal level of the net, as the height was gradually increased, which preserved the skill technique and thus developed the technical performance and accuracy of the skill indirectly and thus helped reduce the burden The reality of the teacher compared to other teaching methods that depend entirely on the teacher, where the aid that was designed by the researcher had a great role in the development of the technical performance of the skill of crushing volleyball for students, as the clarity of the goal of the developmental unit and its consistency with the real level of students will facilitate Learning and thus achieving the goal of the educational unit, as "the clarity of goals and their identification in behavioral images or specific levels of performance are meaningful and effective".

The researcher also attributes the development of the crushing hitting skill to the use of the auxiliary method that was designed by the researcher among the students, as the principle of gradation from easy to difficult had a significant impact on the development of the technical performance of the skill and the full extension of the arms when touching the suspended ball, as well as the repeated use of exercises Where the auxiliary method helped the students to increase their experiences [2]. In addition to increasing the number of repetitions of the exercise within the same educational unit, it helped to give the appropriate opportunity for optimal performance essentially, and this helped to perform the skill in all its parts. In order for the exercise to be effective, two basic things must be taken into account: The exercise and the quality of the exercise [3] and all of this helped the

experimental group to develop the technical performance of the crushing skill.

#### 4. Conclusions and Recommendations

#### 4.1 Conclusions

- The results achieved by the tests proved the validity of the educational exercises prepared by the researcher through the clear development of the overwhelming multiplication skill.
- The use of the assistive method helped to increase the number of repetitions for one exercise, which was positively reflected in the development of the crushing hitting skill.
- 3. The auxiliary method had a great impact in reducing the effort exerted on the teacher through the development in the technical performance of the crushing skill.

#### 5. Recommendations

# Based on the conclusions reached, the researcher recommends the following:

- 1. Adopting the method to help teach the skill of overwhelming multiplication to give it good results.
- 2. The possibility of using the method to help develop other skills, such as the blocking skill.

Work on designing aids for other skills in order to reduce the effort on the shoulders of the teacher and develop the technical performance of the skills faster.

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