

## THE SIZE OF THE EFFECT RESULTING FROM THE USE OF EXERCISES WITH AUXILIARY TOOLS IN LEARNING SOME BASIC VOLLEYBALL SKILLS FOR BEGINNERS

Jasim Mohammed Rashid<sup>1\*</sup>, Saifuldeen Khalid Ahmed<sup>2</sup>, Bahaulddin Ali Raheem<sup>3</sup>

<sup>1</sup>AL-Esraa University College, Department of physical education and sports sciences, Baghdad, Iraq

<sup>2</sup>Gilgamesh Ahliya University, College of Physical Education and Sports Science, Iraq

<sup>3</sup>AL-Esraa University College/Department of physical education and sports sciences, Baghdad, Iraq

### Abstract

In scientific and human research, you often search for the effect of variables on other variables, and this is what we find a lot in experimental research, as the researcher tries to know the effect of an independent variable on a dependent variable or independent variables on dependent variables. It should be pointed out to a very important point, which is that statistics deals with numbers, so it is possible through these numbers and by conducting certain statistical operations to reach results for statistical significance. The researchers noted through their modest field experience as former players, and found that the previous studies were interested, especially the experimental ones, in how to produce the results in their form as significant differences between the variables, and this requires a complementary procedure to show which of these differences was more feasible in being affected by the use of exercises with auxiliary tools In learning some basic volleyball skills for beginners, The aim of the research is to describe exercises using tools that help in learning some basic volleyball skills for beginners. As the researchers used the quasi-experimental approach, for its suitability to the nature of the problem to be solved The research community, who are students of the second stage, numbering (142) students, divided into four divisions, and among those divisions, the researcher chose in a random manner and by (lottery) division (A, B), and they were divided into two groups, experimental and control, that is, by (40) students, as each group included of (20) students, and thus the proportion of the sample from the research community (28%), As these exercises were prepared using the aids and tools in the educational units, The researchers used statistical methods to process the data by using the statistical package (spss). The researchers recommended emphasizing the knowledge of the size of the impact resulting from learning the mathematical skills by using the tools that help in learning the skills in question, as they are more effective and in the various stages of learning and be an essential part in the content of the curriculum.

**Keywords:** The size of the effect resulting. Auxiliary exercises. Learn volleyball skills.

### Introduction

As the researcher is trying to know the effect of an independent variable on a dependent variable or independent

Manuscrito recibido: 15/06/2022  
Manuscrito aceptado: 13/07/2022

\*Corresponding Author: Jasim Mohammed Rashid, AL-Esraa University College, Department of physical education and sports sciences, Baghdad, Iraq

Correo-e: jasim.mohammed81@esraa.edu.iq

variables on dependent variables, for example, the topic of our research is learning some basic skills in volleyball for beginners. Certain statistical operations to reach results for statistical significance, Here lies the importance of the research in knowing the size of the impact of using exercises with auxiliary tools and learning some basic skills in volleyball for beginners, given that this age group is the nucleus and the basis for choosing good players in the future. It contributes to providing educational situations in various forms, including free practice in performance and time-limited practice according to the nature of the learning stage, as well as giving excitement and suspense and saving effort and time for the learner.

### Research Problem

The researchers noted through their modest field experience as former players, and found that the previous studies were interested, especially the experimental ones, in how to produce the results in their form as significant differences between the variables, and this requires a complementary procedure to show which of these differences was more feasible in being affected by the use of exercises with auxiliary tools In learning some basic skills in volleyball for beginners, where a statement of the size of the performance was used, as well as the lesson's lack of auxiliary tools, which made this exciting and exciting game boring and difficult and led to the alienation of some learners from it and did not take enough attention during the application of the educational unit, which negatively affects the Learning it, which prompted researchers to delve into this problem as it is a new scientific attempt to learn the game of volleyball, so the researchers decided, through their study, to identify the impact of using exercises with tools to help learn some basic volleyball skills for beginners and achieve great success in the course of the game.

### Research objective

- Description of exercises using tools to help learn some basic volleyball skills for beginners.
- Recognizing the size of the impact of using exercises with tools to help learn some basic volleyball skills for beginners.

### Research hypotheses

- There is a positive effect between the pre and post tests for the experimental and control groups in learning some basic volleyball skills for beginners.
- There are statistically significant differences between the post tests of the experimental and control groups in learning some basic volleyball skills for beginners.

### Research fields

- Human field: Students of the second class intermediate / Al-Intisar School for Boys / Diyala Governorate
- Time field: (15 /11/2016) ) to (1/3/2018) .
- Spatial field: Sports field in Al-Intisar School, Diyala Governorate.

### Research Methodology and Field Procedures

#### Research methodology

The researchers used the quasi-experimental method, for its suitability to the nature of the problem to be solved, and thus it is one of the most adequate means in order to obtain information and results.

#### Community and sample research

The research community, who are students of the second stage, numbering (142) students, divided into four divisions, and among those divisions, the researcher chose in a random way and by (lot) division (A, B) and they were divided into two groups, experimental and control, that is, by (40) students, as each group included of (20) students, and thus the sample percentage of the research community constituted (28%), which is an appropriate proportion to truly and honestly represent the research community, as all of the following were excluded:

- Students who are not in regular attendance and their number is (13) student.

- Students who have failed, and their number is (7).
- Students practicing the game, and their number is (3) students.

**Methods and tools were used in the research**

- The volleyball court is legal.
- Measuring tape of metal length (5 m), number (1).
- Flying balls of Chinese origin (20).
- Smooth wall.
- 5 cm wide colored adhesive tape.
- Wooden scroll boards with four hanging balls, number (2)
- Transmitter belt number (20).
- Auxiliary wood board: number (10).

After reviewing the learning resources, the global Internet, and some Arab and foreign research, the researcher was able to design a set of tools that help in the process of learning the selected skills, which are locally manufactured tools that have safety factors and increase repetitions in performance and arouse the suspense of learners, most of these means are tied balls And hanging rings and nets of different shapes and sizes.

Wooden scroll boards with four hanging balls. auxiliary wood board, transmitter belt (Muhammad Tawfiq Hassan<sup>(1)</sup>).

**Tests Used**

- Transmission test from above (Mohamed Sobhi Hassanein and Hamdi Abdel Moneim) <sup>(2)</sup>.
- Swipe skill test(previous source) <sup>(3)</sup>.

**Pre-tests:** The tribal tests in the selected skills under study (sending - passing from the bottom) were conducted for the two research groups of (40) students on Wednesday and Thursday, corresponding to 14-15/12/2020) at (8.30) in the morning in the indoor volleyball hall at the Faculty of Physical Education and Sports Science.

**The exercises used in the research:** The educational curriculum of the experimental group was implemented in the first semester of the academic year (2017-2018) for the period from (6/11/2017) to (27/12/2017).

**First:** The preparatory section: (the total time for the preparatory section is (10) minutes and includes).

- Introduction and warm-up: the students are stopped in a unified format and their absences are taken and the sports shout for the beginning of the lesson is repeated and its duration is (2 d).
- Physical exercises: in this part, special exercises are given to the parts of the body working in performance and focus on the muscles that bear the greatest weight during the process of performing the skills in the educational unit, such as exercises (for arms for the torso - for the legs) and the duration of this part is (5) minutes.

**Second:** The main section: (In this section, the exercises prepared within the curriculum will be worked out by applying them to learn the skills under study, and its duration is (25) minutes and includes two parts).

- The educational activity: In this part, the skill is explained and presented to the students. Thus, the duration of the educational part is (10) minutes.
- Applied activity: in this part, exercises are practiced with auxiliary tools within the educational units in coordination, motor response, and the skills under discussion by the students, as corrections are made for the errors of skill performance from the teacher, as well as giving feedback to the students. The duration of this part is (15) minutes, During which the exercises were applied, as three exercises were applied in each educational unit, the duration of each exercise was (5) five minutes, with a total of (15) minutes. It was on Mondays and Wednesdays, knowing that the unit time was 40 minutes.

**Third, the closing section:** The duration of this section is (5) minutes. In this section, a small game is given for the purpose of relieving the effort and spreading excitement, suspense and enthusiasm among the students, then giving some advice and directions, standing in line and ending the educational unit by going to the class as shown in table 1 (Table 1).

The researchers conducted an impact size on the original data of the research to complement the research to identify the skills that were activated more as a result of using the auxiliary tools.

**Post-tests:** The researchers conducted the post-tests after completing the educational curriculum and its units amounting to (16) units and for the two groups (experimental and control) on Monday and Tuesday (12-14/1/2021), taking into consideration all the circumstances, conditions, and procedures of the tribal tests in terms of place, tools and method. Implementation and the assistant team itself for the purpose of obtaining accurate results.

**Statistical methods:** The researchers used statistical methods to process the data by using the statistical package (spss).

**Presentation, analysis and discussion of the results**

The researcher presented the results of the tribal and remote measurements of the research sample, by displaying the arithmetic means and standard deviations in an illustrative table after performing the necessary statistical operations for them, in order to facilitate the observation of the results, as well as making a comparison between the tribal and remote tests by analyzing and interpreting the results of all the tests to know the reality of the differences and their implications. Statistics, according to a precise scientific perspective, in order to achieve the objectives and hypotheses of the research.

**Discussing the Results**

Discussing the results of the pre and post tests in the basic skills of volleyball (serving from the top, passing from the bottom) for the control and experimental groups. Table (1,2) shows that there are significant differences between the pre and post tests in the basic skills (sending from the top, scrolling from the bottom) under study. Skills and given a sufficient number of exercises through the use of some aids that contributed to changing the pattern and diversity of exercises, as well as their implementation of iterative attempts that were reviewed, audited, calculated and divided according to the time of each of the three exercises in the applied section of the main section within the single educational unit, which achieved: During which the level of learning was raised, attracted them to work, and pushed them to seriousness and attention during the application of vocabulary, which had a positive impact on the morale of the differences. And the clear improvement in performance

**Table 1:** Shows the divisions of the educational unit, its times and percentages during the educational curriculum.

Sections of the educational unit		Time during the unit	Time during the course	percentage %
Preparatory section minute 10	Introduction and warm-up	Minutes 5	Minutes 80	12.5%
	physical exercise	Minutes 5	Minutes 80	12.5%
Main section minutes 25	Educational aspect	Minutes 10	Minutes 160	25%
	Application side	Minutes 15	Minutes 240	37.5%
Final section minutes 5	Mini game	Minutes 4	Minutes 64	10%
	leave	Minutes 1	Minutes 16	2.5%
Total		Minutes 40	Minutes 640	100%

**Table 2:** It shows the arithmetic means, standard deviations, and the effect size of the pre and post tests of the experimental group for basic skills.

Variables	sample number	Pre-test		Post-tests		T value	Level sig	Effect size
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
The skill of transmitting from above	20	20.100	2.882	38.100	5.057	13.805	0.000	0.777
Top pass skill		23.100	3.386	36.900	4.364	17.321	0.000	0.645

**Table 3:** It shows the arithmetic means, standard deviations, and the effect size of the pre and post tests of the control group in the basic skills of volleyball.

Variables	sample number	Pre-test		Post-tests		T value	Level sig	Effect size
		Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
The skill of transmitting from above	20	21.450	3.395	25.800	2.308	5.490	0.000	0.555
Top pass skill		22.050	3.120	27.450	4.275	2.219	0.000	0.193

was the reason for the clarity of the general objective of the units of the educational curriculum and its consistency with the abilities of the students. Clarity of goals and their identification in behavioral images or specific performance levels is meaningful and effective (Ammar Khalil Ibrahim) (3). The researchers believe that the effectiveness of exercises with auxiliary tools has become clear their impact on the technical performance of the selected skills, which need compatibility between the eye and the striking arm in the sending skill, and there is a compatibility between the movement of the hands and feet in the case of scrolling from top and bottom, so the students' practice and application of motor and skill abilities exercises positively affected the finding of neuromuscular compatibility through continuous repetition of the skill, which increased the motor sense and gave an advantage in determining the performance of the movement and reducing the percentage of its errors. The feeling of mental and physical skill contributes to its development, especially if it is within a program based on the scientific standards to which the educational process is subject (Schmidt) (4). This is what was achieved through the harmonious skill exercises that were included in the prepared curriculum and were based on scientific bases aimed at "acquiring the body beauty, fluidity and accuracy in performance as well as various good basic skills and learning proper technical performance (Nahida Abed Zeid) (5). The researchers believe that the experimental group that used repetitive exercises within the prepared curriculum has contributed to developing the speed of the motor response and learning the selected basic skills, because repetition leads to correcting the motor path of skills and is a basis for learning and determining the number of times the performance of the movement is repeated is an important matter. The greater the repetition of a particular movement or skill, the greater the ability of motor memory to determine the appropriate program for that movement or skill (Yarub Khion) (6). The speed of the motor response is necessary for the volleyball player, as he needs to adapt quickly to what the opponent will do, and this depends on the speed of the response to the movement and the amount of speed of his movement in different directions and situations and the ability to rotate, fly and roll without dropping his skill and physical level (Ali Sabhan) (7). Tools and aids contribute greatly to the individual's acquisition of technical skill, mastery and stabilization (Afaf Ahmed Tawfik)<sup>(8)</sup>. The coach's choice of exercises is gradual in difficulty, which will increase the players' experience (Mufti Ibrahim)<sup>(9)</sup>. Understanding the exact parts of the skill helps to discover the mistakes that the learner may make, especially in the early stages of learning (Youssef Qatami)<sup>(10)</sup>.

### Conclusions and Recommendations

- The size of the resulting effect for the students of the experimental group that was taught with the auxiliary tools has outperformed the students of the control group that was taught without the aids in learning some technical skills in volleyball.
- Following the correct scientific method in developing the vocabulary of the curriculum and grading it from the general to the particular, from easy to difficult, has a positive effect.

### Recommendations

- Emphasis on knowing the size of the impact resulting from learning mathematical skills by using tools that help in learning the skills under discussion, as they are more effective and in the various stages of learning and are an essential part of the content of the curriculum.
- Conducting similar studies using aids to learn volleyball skills for different age groups and for both sexes.
- Conducting similar studies on different age groups and skills in other sports.

### References

- Muhammad Tawfiq Hassan (2018), The effect of exercises with auxiliary tools and a miniature playground on coordination, motor response, and learning some basic volleyball skills for beginners, PhD thesis, College of Physical Education and Sports Sciences / University of Diyala.
- Mohamed Sobhi Hassanein and Hamdi Abdel Moneim (1997) The Scientific Foundations of Volleyball and Measurement Methods for Calendar, 1st Edition: (Cairo, Al-Kitab Center for Publishing).
- Ammar Khalil Ibrahim (2015) The effect of overlapping designs on exercise scheduling to improve response speed and accuracy of motor performance for some skills of young players in volleyball: (PhD thesis, College of Basic Education - Al-Mustansiriyah University).
- Schmidt. A. Richard and Tim (2006) othy , D.lee. Aforementioned source.
- Nahida Abdel Zeid (2008) Fundamentals of kinetic learning: 1st floor (Najaf, Dar Al Dhiya for printing and design).
- Yarub Khion (2010) Kinetic learning between principle and application: (Baghdad, Al-Sakhrah Library for printing).
- Ali Sabhan Sakhi (2004) Anticipation and motor response and their relationship to the accuracy of defensive skills performance of the free player in volleyball: Master's thesis, University of Baghdad, College of Physical Education.
- Afaf Ahmed Tawfik (1989) The effectiveness of using some educational aids in learning the skill of serving in volleyball on achieving educational goals: (Journal of Science and Arts, Volume 3), Helwan University.
- Mufti Ibrahim (1998) Modern sports training planning - implementation - leadership Cairo, Dar Al-Fikr.
- Youssef Qatami (1998) The psychology of learning and classroom learning, 1st floor Amman, Dar Al-Shorouk.