

## **The Effect of Using Complex Special Exercises (Physical - Skill) In the Achievement of Throwing the Discus for the Students**

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### **Abstract**

The purpose of this paper is to study special complex exercises (physical - skill) in the rapid learning of the students for this activity, which will help in improving the achievement in the performance of the students as well, according to the conditions of the education system used for this school year. The fields of research were represented by the students of the Department of Physical Education and Sports Sciences for the academic year (2020-2021), and the time of conducting the experiment was from 10/12/2020 to 20/3/2021. As for the place of conducting exercises and field experiments, the researchers chose the Faculty of Education's playground For Women / Department of Physical Education and Sports Sciences. The experimental method was used because it was compatible with the nature of the research problem, and by designing the method of two equal groups of pre and post-tests. The main research sample of (12) students was selected, and they were divided into two groups, experimental and control, with (6) students per group. Based on the results of the research that were reached within the limits of the research community, it was possible to conclude that the complex special exercises (physical - skill) contributed positively to the achievement of discus throwing for students.

### **Introduction:**

The scientific development came with a great renaissance in the fields of life, which led to a significant development in the fields of life, including the sports field, through the remarkable achievements in various forms of sports thanks to the reliance on scientific methods and methods in sports training based on scientific foundations, which in turn led to an improvement in physical abilities. And skill, which is the basis that enables an individual athlete to reach the highest level in learning and achievement in sports tournaments.

Therefore, the science of sports training today is one of the sciences in the sports field, as it is the science that aims to prepare players in terms of physical and skill and raise them to the highest levels and ranks in sports competitions. As well as the sciences of physical education, this emphasized the need for innovation, innovation, creativity and the discovery of modern means that can affect and develop achievement in various sports.

The arena and field games are among the widespread sports and include jogging, running, jumping, jumping and throwing, and among the throwing activities is the discus throwing activity, which has received great attention in the field of research, which led to many developments in the methods of its education and training and thus led to an improvement in performance and numbers standard.

In the departments and colleges of Physical Education and Sports Sciences in Iraq, including the Department of Physical Education and Sports Sciences in the College of Education for women at the University of Kufa, this activity is studied in the second academic year and the

work is required to learn it and improve the technical physical performance in it the availability of some physical abilities and skills of the student and learning to use some physical exercises And the special skills for the purpose of learning on rapid learning, as the importance of the research lies in the researchers' attempt to use special complex exercises (physical - skill) in the rapid learning of female students for this activity, which will help in improving the achievement in the performance of students as well, according to the conditions of the education system used for this academic year.

### **Research problem:**

Through the researchers reviewing the performance of students in the Department of Physical Education and Sports Sciences in the field and field subject, especially the effectiveness of throwing the disc, and they found the lack of use of special complex exercises (physical - skill) in the performance of students with this effectiveness within the lesson as the vocabulary of the lesson focuses on skill performance on the one hand and performance The physical performance on the other hand, which makes the students 'performance be slow, as a result of the mismatch between physical and skill performance due to the difficulty of the technical performance of this activity and thus the achievement is little, so the research problem is evident in the presence of a weakness in the performance of students in the effectiveness of discus throwing due to the lack of use of complex physical exercises and special skills With this effectiveness, which affects technical performance as well as achievement, the researchers sought to use exercises that address this problem in order to accelerate learning of the effectiveness of discus throwing.

### **Research objective:**

- Knowing the students 'physical abilities and basic skills for the effectiveness of discus throwing in the Department of Physical Education and Sports Sciences, designing special combined exercises (physical - skill) to improve the skills performance of students with the effectiveness of discus throwing and recognizing the effect of using special complex exercises (physical - skill) in the achievement of throwing activity Disk.

### **Research hypotheses:**

- Special complex exercises (physical - skill) have a positive effect on achieving discus throwing effectiveness.

### **Research fields:**

The fields of research are represented by the students of the Department of Physical Education and Sports Sciences for the academic year (2020-2021), and the time of conducting the experiment was from 10/12/2020 to 20/3/2021. As for the place of conducting exercises and field experiments, the researchers chose the playground of the College of Education for woman / Department of Physical Education and Sports Sciences.

### **Research methodology and field procedures:**

#### **Research Methodology:**

The experimental method was used because it was compatible with the nature of the research problem, and by designing the method of two equal groups of pre and post-tests.

**Community and sample research:**

The main research sample of (12) students was selected, and they were divided into two groups, experimental and control, with (6) students for each groups.

**Achievement test in accordance with international law:<sup>(1)</sup>**

- **Objective:** To measure the achieved distance accomplished.
- **The tools used:** a legal throwing department, a throwing field, tablets and a tape measure
- **Method of performance:** Each sample is given six legal attempts, and each attempt is measured with a tape measure, and all attempts are filmed with video cameras from the side for the purpose of evaluating the performance.

**Exploratory experience:**

The two researchers conducted an exploratory experiment on a sample of 6 players, the purpose of which was: -

- Knowing the time taken to perform the test.
- Identify the difficulties that the researcher may face in the course of his work and develop appropriate solutions to them.
- Ensure the validity of the devices and tools used.
- Ensure the adequacy of the auxiliary work team.
- Identify errors in advance before conducting the main experiment.

**Main experience:**

**Pre-tests:**

The researchers conducted the pre-test on 12/1/2021 at exactly ten in the afternoon on the playground of the College of Education for woman / Department of Physical Education and Sports Sciences.

**Specialized exercises:**

The two researchers prepared special complex exercises (physical - skill) related to the technical stages of discus throwing and with the instrument (disc) and similar tools, medical balls of different weights, especially the throwing stage.

**Post-tests:**

After completing the units' application of the vocabulary of special exercises complex (physical - skill), the two researchers conducted the post-tests on 15/2/2021.

**Statistical methods:**The search data was processed through the Statistical Package for the Social Sciences (SPSS)

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

**Presentation of the results of the pre and post-tests of the two groups for the achievement of throwing the disc:**

Table (1) shows the statistical parameters of the control group in the pre and post-tests.

Skills	Pre-test		Post-test		T value	Sig level	Sig type
	Mean	standard deviation	Mean	standard deviation			
throw the disc	14.26	2.01	1.68	16.71	2.07	0.002	Sig

Tables (2) show the statistical parameters of the experimental group in the pre and post-tests.

Skills	Pre-test		Post-test		T value	Sig level	Sig type
	Mean	standard	Mean	standard			

		deviation		deviation			
throw the disc	14.58	2.254	1.587	18.71	5.035	0.000	Sig

Tables (3) show the statistical parameters of the two groups in the post-tests.

Skills	control group		experimental group		T value	Sig level	Sig type
	Mean	standard deviation	Mean	standard deviation			
throw the disc	1.68	16.71	1.587	18.71	8.34	0.001	Sig

The results in Table (1 and 2) show that the values of (T) calculated for the two groups for achievement were statistically significant under an error level less than 0.05, and this indicates a significant development in the results. It made a moral difference and this shows the effectiveness of those exercises that focused on skill performance, and the researchers also attributed the reason for the moral difference for the members of the experimental group as a result of the combined exercises that contributed to the development of performance efficiency and as the results shown in Table (2) appeared. As it focused on the technical aspects of the effectiveness of throwing the discus, and it was organized exercises of gradual difficulty and focus on the aspects of strength and speed, where sports training experts confirmed that regular training in a scientific, studied and programmed manner leads to adaptation and upgrading capabilities and achievement, as <sup>(2-4)</sup>They indicate (that the factors of strength and speed play a major role in determining the final value of the ability, but that there are different ratios that are needed in determining the ability for different activities, as the performance of activities that require ability and are done against great resistance depends on strength more than effectiveness that depends on ability and is done Against it a small resistance where the dependence on speed is greater), the researchers see that the results presented in Table (3), which indicate a significant difference between the members of the two groups and in favor of the members of the experimental group, the exercises used by the experimental group, which were a mixture of physical and motor abilities exercises and skill performance with a focus on increasing the ability of the muscles responsible for performing the preparatory movements, which helped to increase the acceleration process through the body and reduce inertia to increase achievement, as one of the factors affecting inertia is placing the body before using force to take advantage of Newton's law and its application in the sports field we should know the factors that contribute to affecting the movement, so we find that the amount of force used not to gain a body a certain speed varies according to Placing the body before applying the force. If the body to be affected is stationary and we want to give it a specific speed, it requires a certain amount of force. But if the body itself is in a state of motion, even if slow, then to gain the same speed, then the force used is less than the first case, and this explains to us the importance of the preliminary movements. In many sporting events, and this is what was emphasized to be developed through compound exercises for the members of the experimental research sample

### Conclusions and recommendations:

#### Conclusions:

- Based on the research results that have been reached within the limits of the research community, the following conclusions were reached: -
- The complex special exercises (physical - skill) contributed positively to the completion of the discus throw for the female students.
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### **Recommendations:**

- Emphasis on the application of complex special exercises (physical - skill) for their effectiveness and positive effect on students while learning the effectiveness of discus throwing.
- Conducting similar studies on other groups.

### **References**

1. International Law of Athletics: (2011);A translation by SarihAbd al-Karim al-Fadhli, Erbil, Erbil Press.
2. Hussein MardanOmran and Iyad Abdel Rahman: (2011);Biomechanics in Sports Movements, 1st Edition, Al-Najaf Al-Ashraf Press.
3. Sareeh Abdul Karim Al-Fadhli: (2010) ;Biomechanical Applications in Sports Training and Kinetic Performance, Amman, Dijla House.
4. International Law of Athletics: (2011);Translated by SanehAbd al-Karim al-Fadhli, Erbil, Erbil Press.