



The Effect of Skill Exercises According to the Advanced Organizers Strategy on Learning Some Basic Skills in Football

Mohammed Saad Rabeea ¹

¹ University of Mustansiriyah , College of Physical Education and Sports Sciences .

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Abstract

This research aims to identify the effect of skill-based exercises designed according to the strategy of advanced organizations in learning some basic football skills among students. The researcher adopted the experimental method using the two-group design (experimental and control) with the application of the pre- and post-tests to measure the level of skill performance of the sample members. The researcher selected the research population, which consists of first-year evening students in the College of Physical Education and Sports Sciences, Al-Mustansiriya University, their number is (106), and it consists of three sections (A-B-C). Section A had 40, Section B had 30, and Section D had 36. The researcher selected Section A as the research sample, which has a number of (40). After the researcher excluded (5) due to non-compliance and excluded (5) students for the pilot study, the sample number became (30) students, and they were divided into two groups, experimental and control, each group having (15) students. Then the researcher determined the percentage of the sample from the population (37.73). After that, he conducted homogeneity of the sample members in some student variables in order to ensure the validity of the tests and tools used in the research. The experimental group was trained using the Advanced Organizations strategy, while the control group used the traditional teaching method. The training program lasted for eight weeks, with two training sessions per week. The results showed statistically significant differences between the pre-test and post-test scores of the experimental group, favoring the post-test. Similarly, the results showed statistically significant differences between the pre-test and post-test scores of the control group, again favoring the post-test. The experimental group also outperformed the control group in the post-test. These results indicate the effectiveness of using the Advanced Organizations strategy in teaching basic football skills.

Keywords: Advanced organizations, motor learning, basic skills, football, physical education.

¹ University of Mustansiriyah , College of Physical Education and Sports Sciences .
mohammedsaad@uomustansiriyah.edu.iq , <https://orcid.org/0009-0006-8964-6634>



Introduction

Football is considered one of the team sports that receives great attention worldwide, as it is practiced at various age levels and in educational and sports institutions. This game is characterized by the variety of its motor skills and the diversity of its physical and technical requirements, which necessitates the use of effective educational and training methods to help learn and master these skills. In fact, basic skills of football such as rolling, control and shooting the ball are one of most important pillars that players depend on to be able to implement offensive strategies or defensive during a match (Hazaa, 2024; Saeed et al., 2026).

Football is a team sport with constantly changing motor performance that requires a number of specific physical attributes due to (the large size of the pitch, the long duration of the match and/or tactical duties performed both individually and collectively), thus each player needs to possess an optimum level for these attributes along with the basic skills needed for better player performance (Hashim & Naji, 2023; Judah, 2025).

In recent years physical education has experienced significant growth in the ways that modern educational strategies can be implemented to enhance motor learning and help athletes learn sports skills. One of these strategies is the advanced organizers strategy outlined by educational theorist David Ausubel, which directs the learner to identify a global cognitive framework to be used before learning the skill, helping them link this information with previously acquired knowledge (Abdulghani et al., 2025; Abdulghani & Hussain, 2025).

Most research provides evidence that modern educational techniques will enhance motor learning and skilled performance of the learned reveals, since sporting skills are organized and presented in a sequence to aid understanding (Schmidt & Lee; 2019: Mahdi, 2025).

Skill exercises are regarded as one of the most significant teaching methods in football skills due to their role in improving technical performance and developing players' field control (with and without ball) and skill execution (Obeid et al., 2025).

In light of this, the significance of the research is manifested in the effect of skill exercises according to the advanced organizations strategy in learning some basic skills for football by establishing a structured cognitive framework preceding direct implementation supplying with improving rate of motor learning and skill performance (Mufti, 2001: Saleem, & Rashid, 2025).

The advanced organizations' strategy helps in developing technical performance and improving players' ability to execute various skills during play. Therefore, using skill exercises according to a modern educational strategy may contribute to improving the learning of basic skills among players or students (Ali, 2024; Abdulhussein et al., 2025).

This study is titled " The Impact of Advanced Organizational Strategies (Written and Unwritten) on Knowledge Acquisition and Learning Some Offensive Basketball Skills for Students " by the researcher Ghaleb (2021), It aims to identify the effect of advanced organizational strategies (written and unwritten) in knowledge acquisition and learning some offensive basketball skills for students. They used experimental method, first year students in the College of Physical Education and Sports Sciences at Al-Mustansiriya University, accepted for the academic year 2020-2021. Sample. The departments (D, E, F) were chose to represent the research sample. The researcher intends to use three groups, with department D representing the control group and departments E and F representing the experimental groups.

Despite the significant advancements in the field of sports training and teaching methods in physical education, and as the researcher, who teaches football, noticed the students'

weak reception of the subject, the researcher decided to attract coaches and sports workers to use modern strategies that help them keep up with the modernity and developments surrounding local and global sports. Additionally, the absence of modern educational strategies may reduce the effectiveness of the educational process and affect the skill performance level of the learners.

Therefore, there is a need to use modern educational strategies such as the advanced organizers strategy, which helps in organizing information and presenting it in a way that facilitates the process of motor learning. From here, the research problem is defined by answering the following question:

Does the use of skill exercises according to the advanced organizations strategy contribute to better learning of some basic football skills or not?

The importance of this research lies in several scientific and practical aspects, including:

- Developing methods for teaching basic skills in football.
- Employing a modern educational strategy in the field of physical education.
- Helping teachers and coaches improve the learning level of players.
- Contributing to the development of the educational process in physical education.
- Providing scientific results that can be utilized in the development of sports training programs.

Research aims

- Using skill exercises according to the advanced organizations strategy.
- Identifying the impact of these exercises on learning some basic football skills.
- Comparing the results of the experimental group with the control group.

Research hypotheses

- There are statistically significant differences between the pre-test and post-test for the experimental group.
- There are statistically significant differences between the pre-test and post-test for the control group.
- There are statistically significant differences between the two groups in the post-test, favoring the experimental group.

Research fields

Human domain: First-year students in the evening study program at the College of Physical Education and Sports Sciences, Al-Mustansiriya University, accepted for the academic year 2024-2025.

Time frame: 1/9/2025 – 9/11/2025.

The spatial domain is the playground of the College of Physical Education and Sports Sciences at Al-Mustansiriya University.

Research methodology and procedures

This chapter aims to clarify the scientific procedures adopted by the researcher in conducting the study, in terms of determining the methodology used, selecting the research community and sample, the tools and tests employed, as well as the steps for conducting the experiment and the statistical treatments used to analyze the data.

Research Method

The researcher adopted the experimental method due to its suitability for the nature of the research problem, as it is considered one of the precise scientific methods aimed at studying the causal relationship between variables thru relative control of the surrounding conditions of the experiment. The researcher used the two-group design (experimental and control) with pre-test and post-test, which is one of the most common designs in educational and sports studies to measure the impact of educational programs (Abdul Fattah, 2010).

Research community and its sample

Research Community

The researcher selected the research community, which consists of first-year evening students in the College of Physical Education and Sports Sciences at Al-Mustansiriya University, totaling (106) students. The community is divided into three sections (A-B-C), with section A having 40 students, section B having 30 students, and section D having 36 students.

Research sample

The researcher, then, chose the research sample in Section A which consisted of (40) students. Upon excluding (5) students because they were not compliant and further excluding (5) students for the pilot study, sample size became (30) students. They were selected randomly and they were divided into control and experimental groups (15) students each. The researcher then determined the polynomial sample ratio from the crowded population (37.73). Then the researcher conducted homogeneity tests for a number of variables among members of the sample as seen in table (1).

Table 1. Homogeneity of the Sample in the Variables of Height, Body Mass, and Chronological Age

No.	Variables	Unit of Measurement	Mean	± SD	Median	Skewness Coefficient
1	Height	cm	128.57	1.72	1.34	0.05
2	Body Mass	kg	35.56	1.74	34.50	0.06
3	Chronological Age	year	10.53	0.51	10.50	0.95

Devices and research tools

The means and tools used

- Arab and foreign scientific sources and references.
- Personal interviews.
- Exercises.
- The assistant work team.
- Technical performance evaluation form for basic skills tests in football.

The used devices

The researcher relied on many scientific tools and means needed to obtain the required data and facts thru: (5 soccer balls), (30m leather measuring tape), (3 digital electronic stopwatches), (soccer field), (10 markers), (2 whistles).

Field research procedures

Determining the research variables and their tests

The researcher identified the skills used to conduct the tests on them, which are rolling, ball control, and shooting.

Skill tests

The researcher adopted a set of skill tests that measure some basic skills in football, as shown in Table (2) :

Table 2. Skill Tests

No.	Test Name	Type of Test	Objective of the Test	Purpose of the Test	Performance Method	Scoring Method
1	Dribbling Between Cones Test	Skill Test (Dribbling)	Measuring the ability to control the ball while moving	Evaluating dribbling skill and motor coordination	Dribbling the ball between cones as quickly as possible	Time taken (lower is better)
2	Ball Trapping Test	Skill Test (Ball Reception)	Measuring the skill of receiving and controlling the ball	Determining the player's ability to stop the ball accurately	Passing the ball to the player and attempting to control it within a specified area	Number of successful attempts
3	Shooting at Goal Test	Skill Test (Shooting)	Measuring shooting accuracy	Evaluating offensive ability	Shooting balls toward a goal divided into target zones	Scores based on shooting accuracy

The researcher made an adjustment in the method of recording the test to be suitable for measuring the condition whose results are to be known, evaluating performance thru three judges to ensure the objectivity of the tests (Appendix No. 2).

Experimental design

The researcher adopted a two-group design with pre-test and post-test.

The pilot study

The first pilot study

The researcher conducted a preliminary exploratory experiment on a sample from the original research community, consisting of (10) students who will not participate in the main experiment on (1/9/2025), which falls on (Monday). The aim of conducting this experiment was to assess the validity of the devices, understand the extent to which the sample members comprehend the vocabulary and tests, identify the obstacles that the researcher might face when conducting the main experiment, and evaluate the efficiency of the assisting team during their task. The tests were conducted to extract the scientific foundations.

The second pilot study

The researcher conducted the second pilot experiment on (8/9/2025), corresponding to Monday at 1:00 PM, to clarify the research objective to the sample; to introduce the sample and the assistant team to the working mechanism, and to repeat the tests to understand the scientific foundations, the time allocated for the educational unit, and the number of repetitions needed by the player.

Validity

A valid test is "one that accurately measures the construct it is designed to measure and does not measure anything else instead or in addition to it." Therefore, the researcher used face validity as shown in Table (3).

Reliability

Test reliability means that the test yields the same results when the test is repeated on the same individuals under the same conditions. To calculate the reliability coefficient, the researcher used the test-retest method to find the test reliability coefficient. The tests were applied to a sample of the pilot study and were re-administered after 5 days under the same conditions to obtain the test and retest results scientifically. It was concluded that all the tests had high reliability, as shown in Table (3).

Table 3. Test Coefficients

Tests	Reliability (R)	Validity (√R)	Error Level
Dribbling	0.861	0.928	0.002
Ball Trapping	0.846	0.920	0.001
Shooting	0.781	0.884	0.001

At a degree of freedom (9) and a significance level of (0.05).

Field procedures

Pre-tests

The researcher conducted the pre-tests on (13/9/2025), corresponding to (Saturday), on the selected sample.

The main experiment

The exercises used were applied to the experimental group sample on (14/9/2025), corresponding to Sunday at 1 PM, with two educational units per week for a duration of 8 weeks, totaling 16 educational units. The exercises for the experimental group were implemented according to the advanced organizers strategy (non-written) in the lesson designated for the students. The main part of the lesson was conducted, and the lessons included explanations, clarifications, and presentations using a data show for skills and exercises to acquire and store information in memory more quickly. The control group followed the method used by the teacher. The main experiment was completed on (8/11/2025), corresponding to Saturday.

Post-tests

After completing the main experiment, the researcher conducted the post-tests on the selected sample (experimental and control groups) under the same conditions as the pre-tests on (9/11/2025), which corresponds to Sunday.

Statistical methods

The researcher used appropriate statistical methods to process the data generated using the statistical package (SPSS).

The formulas were as follows:

- Arithmetic mean
- Median
- Standard deviation
- Coefficient of skewness
- Percentage
- (t) test
- Rate of development
- Correlation

Results

Table 4. Results of the Differences Between the Arithmetic Means and Standard Deviations of the Pre- and Post-Tests for the Control Group

Variables	Pre-Test Mean	± SD	Post-Test Mean	± SD	Calculated t-value	Improvement Percentage	Error Percentage	Significance
Dribbling	5.61	1.05	5.75	0.70	0.97	2.43	0.014	Significant
Ball Trapping	5.75	0.87	6.50	0.53	3.00	11.53	0.046	Significant
Shooting	5.62	1.06	6.10	1.38	0.56	7.80	0.022	Significant

At a degree of freedom (14), significance level < 0.05.

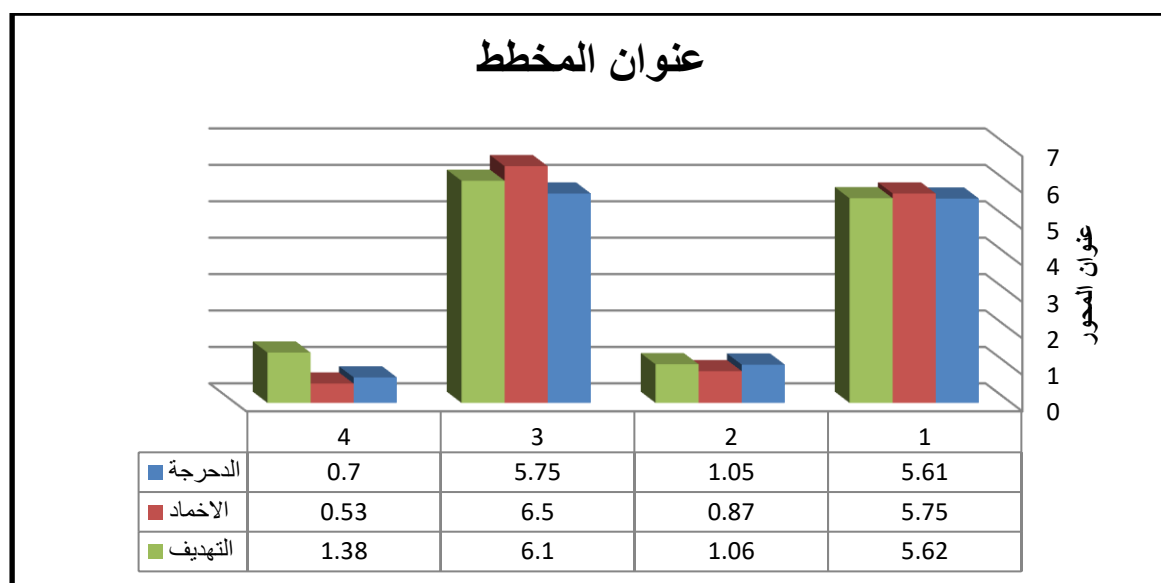


Figure 1. The graph illustrates the pre-test and post-test results for the control group.
Discussion of the pre-test and post-test results for the control group

Thru the results of Table (4), significant statistical differences were found in favor of the post-tests in the control group, indicating a relative improvement in the level of skill performance. This improvement is attributed to the effect of traditional training, which contributes to performance enhancement thru repetition and practice.

Table 5. Results of the Differences Between the Arithmetic Means and Standard Deviations of the Pre- and Post-Tests for the Experimental Group

Variables	Pre-Test Mean	± SD	Post-Test Mean	± SD	Calculated t-value	Improvement Percentage	Error Percentage	Significance
Dribbling	5.62	1.06	6.62	0.74	0.79	15.10	0.632	Significant
Ball Trapping	5.87	0.83	7.62	0.91	3.00	22.96	0.243	Significant

Shooting 6.00 0.75 7.12 1.24 0.56 15.73 0.699 Significant
At a degree of freedom (14), significance level < 0.05.

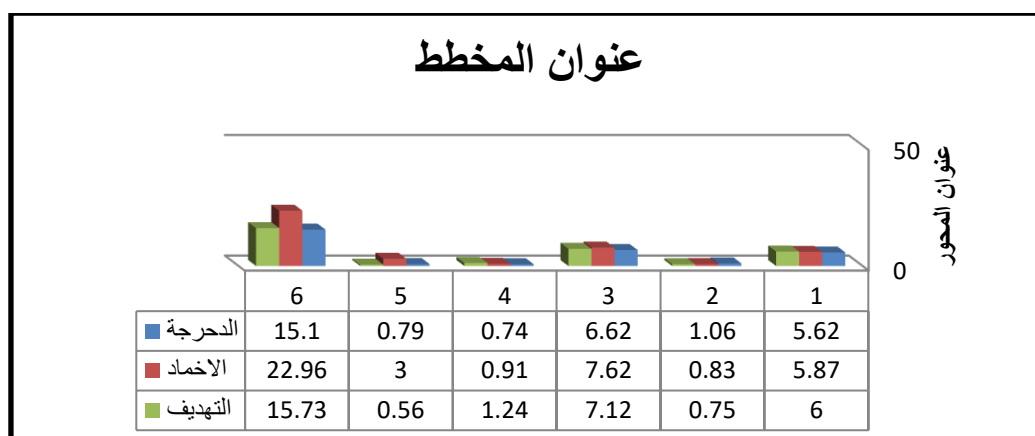


Figure 2. The graph shows the pre-test and post-test results for the experimental group

Discussion

Thru the results of Table (5), it was found that there are statistically significant differences between the pre-test and post-test in favor of the post-test for the experimental group. The researcher attributes these differences to the effective use of the advanced organizations strategy, as the goal of this strategy is to develop and improve performance levels and accelerate the learning process.

This was confirmed by (Abdul Hussein, 2014) that students, especially beginners, need to use advanced organizers to make the understanding and learning process more exciting, engaging, and enjoyable, moving away from the routine in educational and rhythmic lessons. This makes the subject they study clearer, more meaningful, and more beneficial because advanced organizers can simplify the learning process, make the educational content more familiar, and develop various cognitive levels (Waleed Abdulkareem & Sattar Jabbar, 2025; Abdulkareem et al., 2025).

The researcher agrees with what was stated by (Zayer et al., 2014) that in this organizer, existing knowledge is also organized, and new experiences are considered to help find similarities. This achieves a balance for students that helps them develop their abilities and experiences. The knowledge acquired by the student consists of facts, concepts, and raw cognitive data available to the learner in the plan, which Ausubel calls the "cognitive structure." The nature of the new learning materials that an individual is exposed to varies in terms of their reasonable and comprehensible connection to the cognitive structure. This connectivity leads to what Ausubel calls meaningful learning (Fouad Abu Hatab, Sadiq, 1996).

Conclusions

- 1- The skill exercises according to the advanced organizers strategy contributed to improving the learning of basic football skills, as the experimental group showed a clear improvement in the level of skill performance compared to its results in the pre-test, indicating the effectiveness of this strategy in developing motor learning.

- 2- The experimental group outperformed the control group in the post-test, indicating that the use of advanced organizational strategies was more effective than the traditional method in teaching skills, as it relies on organizing information and presenting it in a way that helps the learner understand and comprehend.
- 3- The presence of relative improvement among the control group members, indicating that traditional training contributes to the development of skill performance, but this improvement was limited compared to the experimental group.

Recommendations

- 1- Conduct similar studies on different games
- 2- Conducting similar studies for ages that suit such studies

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Appendices

Appendix 1. Names of the Assistant Work Team

No.	Name	Occupation	Academic Qualification
1	Assist. Lecturer Idris Jabbar Qasim	Lecturer	Al-Mustansiriya University / College of Physical Education and Sports Sciences / Master's Degree
2	Assist. Lecturer Ihab Ahmed Nouri	Lecturer	University of Baghdad / College of Physical Education and Sports Sciences / Master's Degree
3	Raad Saad Rabee	University Teacher	Al-Mustansiriya University / College of Basic Education / Department of Physical Education and Sports Sciences

Appendix 2. Names of the Experts

No.	Name	Occupation	Academic Qualification
1	Assist. Lecturer Haider Hussein Saleh	Lecturer	Al-Mustansiriya University / College of Physical Education and Sports Sciences / Master's Degree
2	Assist. Lecturer Osama Mundhir Hussein	Lecturer	Al-Mustansiriya University / College of Physical Education and Sports Sciences / Master's Degree
3	Assist. Lecturer Abbas Hussein Khalifa	Lecturer	Al-Mustansiriya University / College of Physical Education and Sports Sciences / Master's Degree



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