



The impact of footwork exercises according to different playing positions on some complex offensive skills of Basketball players under the age of 16 years old

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Abstract

The significance of research lies in the design of footwork exercises based on various planning scenarios. This refers to certain complicated attacking capabilities of basketball players under the age of 16. In order to achieve success, solid foundations must be built to overcome changing, fast, and increasing game scenarios with the necessary speed and precision.

Through this research, the researcher aimed to answer several questions, the most significant of which was to determine the skill levels of players in backdoor and L-cut techniques to assess the basic skill levels of young basketball players. The objectives of the research are to develop footwork exercises tailored to various planning positions for some complex offensive skills of these players.

Regarding the research findings, the footwork exercises based on different planning positions had a positive impact on certain complex offensive skills of basketball players under 16 years of age. The researcher employed the experimental method (with two equivalent groups) as a research procedure aligned with the study's objectives. The research community consisted of players from the Sports Cricket Club in basketball, specifically those under 12 years of age.

The participants were randomly separated into two groups (experimental and control), each of which included six players.

As for the conclusions, the effectiveness of footwork exercises based on different planning positions was evident in some of the complex offensive skills of basketball players. The recommendations and suggestions emphasized the importance of training the studied skills (scoring of all kinds, handling of all types, floater shot, receiving the ball near the basket, and offensive booking). Additionally, attention should be given to bio-kinetic abilities and the necessity to diversify the training methods employed by coaches.

Keywords :

footwork exercises, basketball players, planning positions.



1-1 Introduction:

The world of coaching is considered one of the most important fields that has undergone many developments in recent years. This is due to the experiments and scientific research that have been and continue to be focused solely on raising the technical level of sports in general, as well as pushing athletes to their highest potential. There is now no limit to what can be achieved; everything can be utilized to enhance an athlete's performance.

One of the essential elements required to sustain the training process in general revolves around using correct scientific methods, alongside modern scientific training curricula that encompass comprehensive physical, skill-based, tactical, and psychological preparation. The focus is on employing scientifically sound training methods that align with the element to be developed, whether it be physical or skill-related.

Coaches must be precise in preparing the approach, as well as using the appropriate method for the type of sport they are coaching and the physical aspects they are developing to achieve their goals. Additionally, training should incorporate the (foot work) method, which is considered one of the most modern techniques that assists in both physical and skill adaptation simultaneously.

The effectiveness of game performance particularly relies on the execution of fast movements supported by high-level motor agility. This is essential for overcoming the opponent's defensive maneuvers and prolonging game time.

The responsibilities assigned to the player during the match demand high physical effort to compete, rapid and effective leg movement, and keen observation of the opponent's actions, along with other duties. Additionally, there is a need for high-speed transitions between defense and attack, and vice versa.

In this context, the basketball player's physical and skillful requirements for such exercises become evident. This entails the ability to sustain strong and fast movements at maximum or sub-maximum levels with a high degree of efficiency, as one of the game's characteristics is the variety and unpredictability in the execution of game movements.

The offensive skills in basketball, especially (Back door, L.cut) is the basis of the rivalry that extends, level and rank the teams. Therefore, using the scientific approach to track abilities is a crucial basis that needs to be addressed in an appropriate technical method.

This is why it is important to research the preparation of foot work exercises according to different planning positions in some complex offensive skills of basketball players under 16 years of age. In order to reach the top by building strong sound foundations. This is to overcome changing, fast and escalating game situations with the required speed and accuracy.

1-2 Research Problem

Through this research, the researcher attempted to answer several questions, the most important of which are:

1. What are the levels of players in the skills of backdoor cuts and L-cuts?
2. What are the core skill levels within young basketball individuals?
3. How can footwork exercises based on diverse tactical scenarios affect some of the advanced offensive talents of basketball players under the age of 16?

1-3 Research Objectives

1. To prepare footwork exercises based on various tactical situations for some complex offensive skills of basketball players under 16 years old.

2. To identify the impact of footwork exercises based on various tactical situations on some complex offensive skills of basketball players under 16 years old.

1-4 Research Hypothesis

1. Footwork exercises based on various tactical situations have a positive effect on some complex offensive skills of basketball players under 16 years old.

1-5 Research Fields

1-5-1 Human Field: Basketball players from Al-Karkh Sports Club.

1-5-2 Temporal field: From November 1, 2024, to March 1, 2025.

1-5-3 spatial field: The hall of Al-Karkh Sports Club.

3- Research Methodology

3-1 Research Method:

The researcher employed the experimental technique (with two equivalent groups) as a research procedure that was appropriate for the study's aims.

3-2 Research Community:

The study involved 12 under-16 Al-Karkh Sports Club players, randomly divided into experimental and control groups, each with six participants.

3-4 Research Tools, Equipment, and Resources:

3-4-1 Tools and Equipment Used:

- * Official basketball court
- * Stopwatch (2)
- * Electronic calculator (Sony)
- * Basketballs (4)
- * Markers (10)
- * Ground ladder

3-4-2 gathering methods include

- Arab and international sources.
- Individual interviews.
- Measurement, as well as physical and skill assessments.

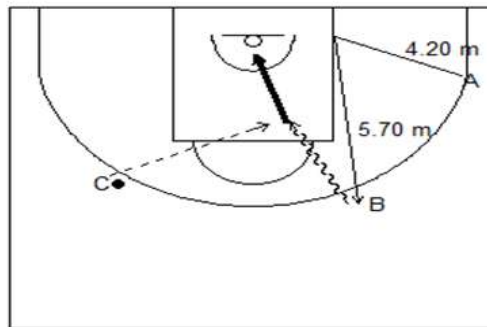
3-4-3-2 Tests Used in the Research

- **Test Title:** Performance of the Composite Skill (L.cut, collecting the ball, and delicate firing). The aim of the test is to evaluate the performance of the composite skill (L.cut, retrieving the ball, and delicate firing).

Materials & Instruments: Basketball court, 5 basketballs, sticky tape, 5 markers, whistle, and timer.

Performance Description: The player begins at point (a) and, upon hearing the starting whistle, runs from below the hoop to a distance of (4.20) meters, then turns towards point (b) at a distance of (5.70) meters, before turning and sprinting towards the hoop to receive the ball from point (c) and execute a gentle shot, as shown in the figure above. The act is repeated for forty seconds.

Recording: The performance is documented according to the actual performance assessment form for the L.cut skill, as detailed below:

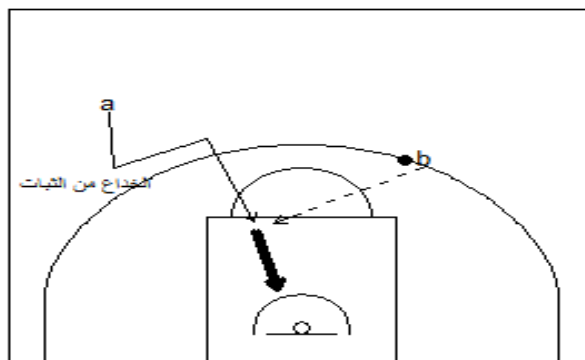


Test Title: Assessment of Composite Skill Performance (Back Door: Receiving the Ball and Shooting

Materials & Instruments: Basketball court, 5 basketballs, sticky tape, 5 markers, whistle, and timer.

Performance Description: The player stands at point (a). When they hear the beginning whistle, they make a feint to mislead the defender at point (b), then take the ball and fire toward the target, as indicated in the diagram above. This act is repeated for forty seconds in total.

Evaluation: is recorded according to the actual performance assessment form for the Back-Door skill, as shown below.



3-3-4-The Exploratory Experiment:

The exploratory experiment is typically conducted to assess the suitability of tests, the level of response from sample participants to those tests, the time taken to complete the tests, and the training unit. This is attempted to utilize the exploratory experiment to benefit the main experiment, which took place on Sunday, December 1, 2024, with the Al-Karkh Sports Club team.

3-4-4 Main Experiment Procedures:**3-4-4-1 Pre-tests:**

The pre-tests for the study sample were scheduled on Wednesday, December 4, 2024, in the hall of the Al-Karkh Sports Club.

3-4-4-2 Training Curriculum and Its Components:

The study also developed a training curriculum based on the principles and foundations of sports training, taking into account training load components such as volume, intensity, and density, as well as the sample's and trainees' ages.

- Duration: 8 weeks - Units per week: every three days (Saturday, Monday, and Wednesday) for a total of Eighteen exercise units.

- The researcher utilized several sports training methods. - Special exercises were executed within 20-30 minutes after the section. - Exercise intensity was measured by pulse (Z/s) and speed (M/s).

3-4-4-3 Post-tests:

After the designated period for the training curriculum was completed, post-tests were conducted for the research sample at exactly 4:00 PM on Monday, February 10, 2025. The researcher ensured that the same conditions and procedures for administering the tests were followed as during the pre-tests. The researcher made every effort to stabilize the surrounding conditions of the tests in terms of (time, location, tools used, execution method, and team) to make them similar in both the pre-tests and post-tests.

3-5 Statistical Methods:

1. Mean
2. Standard Deviation
3. (T) Test for Paired Samples

4. Presentation, Analysis, and Discussion of Results**4-1 Presentation of the Control Group Results**

Table (1)

Represents the means, standard deviations, t-value, and degree of significance for pre-test and post-test changes in study variables for the control group

Variables	Pre-tests		Post-tests		T	Statistical significance
	S	A	S	A		
Back door	11	0.8	12	0.7	1.87	Moral
L.cut	9	0.32	11	0.30	0.12	Moral

The table shows significant differences between pre-test and post-test results for the control group sample, with post-test findings being preferred, as indicated by the smaller significance level values.

4-2 Experimental Group Results Presentation

Table (2)

Experimental group's pretest-posttest differences: means, standard deviations, t-values, and significance levels

Variables	Pre-tests		Post-tests		T	Statistical significance
	S	A	S	A		
Back door	11	0.76	19	0.91	4.62	Moral
L.cut	12	0.31	20	0.23	4.61	Moral

The table demonstrates that the paired samples t-test's significance levels for all variables were lower than the error rate (0.05). This shows that the experimental group's pretest and posttest scores differ statistically significantly, favoring the posttest findings.

4-3 Presentation of the results for the control and experimental groups in the post-tests

Table (3)

presents means, standard deviations, t-values, and significance levels for post-test variables comparing the control and experimental groups

Variables	Unit of measurement	Control group		Experimental Group		Calculated value (t)	Statistical significance
		S	A	S	A		
Back door,	degree	12	0.7	19	0.91	1.75	Moral
L.cut	degree	11	0.30	20	0.23	5.62	Moral

It shows that the significant values for the independent samples t-test for all variables were less than the error rate (0.05), implying that the experimental group outperformed the control group in the post-tests.

4-4 Discussion of Results

The t-test was used to demonstrate the findings of the Back Door and L-Cut skills, which are presented in the tables above. There was a substantial difference between the experimental and control groups, with the experimental group achieving better post-test scores .

The researcher credits the experimental group's development and supremacy to the control group's test results. This is due to the footwork exercises, which helped improve the researched abilities in a way that resembles match performance, as these workouts are advantageous in this respect. It also includes a highly effective blend of skill performance and agility training with the ball. During the execution of the exercises, the two skills are spaced in different directions and arranged in the form of a triangle.

Additionally, it involves a performance of high intensity and speed. There is also a long rest period to allow enough time for recovery.

Regarding the nature of the exercises (footwork) for the development of these skills, they are characterized by a short duration of performance, maximum intensity, and an extended rest period. This provides enough time to restore the healing of phosphate components. As guided exercises vary, they effectively develop the trait you are working on.

Footwork exercises with the ball are also very useful, especially in games that require strength in jumping and speed in performance. These exercises incorporate the complete laws of the game, applying them to real game situations.

5 – Conclusions and Recommendations:

5-1 Conclusions:

1. The effectiveness of footwork exercises in relation to various tactical situations for complex offensive skills in basketball players under 16 years old was evident.
2. Significant statistical differences were noted in the development of offensive skills (Back door, L-cut).

5-2 Recommendations and Suggestions:

Firstly - Based on the research conclusions, the researcher recommends the following:

1. Emphasize training the skills studied (various types of shooting, different types of passing, floater shots, receiving the ball near the basket, offensive screening, and dribbling) along with the biomechanical capabilities.
2. The importance of diversifying the training methods employed by coaches.

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