



THE IMPACT OF PROPOSED EXERCISES ON IMPROVING CERTAIN MOTOR ABILITIES AND FOOTBALL SKILLS

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Abstract

The purpose of the study was to determine how the suggested workouts affected the development of specific motor skills and core football abilities. Because the experimental approach was appropriate for the study's objectives, the researcher employed it. The research sample, which comprised one class of 20 out of 40 first-year students at Al-Nahrain University's College of Biotechnology, was purposefully chosen through partnered preparation. This made up 50% of the first-year class.

The researcher's views and limited football expertise led him to identify the research problem: standard approaches do not considerably enhance or increase motor and skill abilities. Thus, the researcher suggested a series of workouts that started with simple drills and worked their way up to ones that mimicked scenarios from games before ending with gameplay drills. It has been discovered that improving motor skills including balance, coordination, and agility has a good impact on learning and growing foundational abilities.

The purpose of the study was to ascertain the degree to which the suggested workouts enhanced core football skills and specific motor talents. The following were the main conclusions:

- The competitive mindset has a positive effect on football players' ability to improve their shooting.
- Shooting techniques during play and competitive times expedited learning, decreased the amount of time needed, and improved accuracy and performance because of the competitive aspect.
- The degree of motor and skill performance improved when football skills were learned using a variety of approaches and strategies.

Keywords: Motor Abilities, Skills, football, exercises, playing styles.

Introduction

Research, investigations, and scientific efforts have greatly increased athletic performances across all sports disciplines, leading to advancement in a variety of sports domains. There have been significant advancements in football and other sports sciences and expertise during the second part of the 20th century. One of the most popular sports in the world, football requires a variety of talents from its players, all of which are dependent on their physical and motor fitness, which is essential for effective skill preparation.

Football players study and master the physical and skill fundamentals of the game using a variety of scientific and pedagogical approaches. Because of this, instructors and coaches need to be up to date on the newest approaches and procedures that facilitate the use of various learning methodologies to enhance players' performance. Shorouq (2018) noted that one of these contemporary techniques is exercising through game-based drills, saying that "the more game-like drills are used, the better the results in developing fundamental skills."

Learning the fundamentals of football requires strong motor skills. According to Jasim (2015), "There is a strong connection between motor abilities and skill performance level; an athlete cannot master the basic skills of their specialized sport without sufficient motor abilities." Thus, the preparation of a series of suggested exercises that aid in the development of particular motor skills and core football abilities for indoor football is where the significance of this research resides.



It was discovered via the researcher's observations and limited football expertise that conventional approaches do not considerably enhance or build motor and skill abilities. As a result, the suggested exercises begin with fundamental drills and advance to ones that mimic scenarios from games, culminating in gaming drills. The development of motor skills—such as balance, agility, and coordination—has a favorable impact on learning and growing basic skills. The following are the goals of the research:

- To ascertain whether the suggested workouts have an effect on honing core football skills and specific motor abilities.
- To determine how the experimental group and the control group differed in terms of developing core football skills and specific motor talents.

The researcher formulated the following hypotheses:

- In terms of increasing specific motor skills and core football skills, there are statistically significant differences between the experimental and control groups' pre- and post-tests, with the post-tests performing better.
- The experimental group performed better on the post-tests compared to the control group in terms of developing particular motor abilities and basic football skills.

Research Method

The researcher used the experimental method due to its suitability for the nature of the research.

Research Sample

The research sample, which comprised one class of 20 out of 40 first-year students at Al-Nahrain University's College of Biotechnology, was purposefully chosen through partnered preparation. This made up 50% of the first-year class.

Determining Fundamental Football Skills

By determining which skills were most impacted by the competitive approach, the core skills were ascertained. Skills that earned 75% or higher on the questionnaire were chosen after the responses were processed and the percentage was extracted, as indicated in Table 1.

	Fundamental Skills	Relative Importance	Ranking
1	Shooting	75%	1
2	Passing	75.3%	2
3	Dribbling	73.3%	3
4	Dodging	60%	4
5	Ball Control	60%	5
6	Trapping	50%	6

Scoring Test:

Test Name: Scoring Towards a Divided Goal.

Test Objective: Measure the accuracy of shooting the ball towards the goal.

Equipment Used: 5 official soccer balls, rope for dividing the goal, measuring tape, soccer goal, soccer field.

Test Procedures: Place the five balls on the penalty area line in different positions.

Performance Description: The player stands behind the penalty area with the balls facing the goal. Upon the start signal, the player kicks the ball towards the goal to get it into the marked squares within the goal, then moves to the next ball, and so on. Each player is given five consecutive attempts.

Scoring: The score is calculated based on the total points the player gets from shooting the five balls towards the goal as follows:



Five points for square (4)

Four points for square (5)

Three points for square (2)

Two points for square (3)

One point for square (1)

Zero if the ball goes out.

Note: If the ball hits the rope, the higher score is awarded to the player.

Scientific Basis of the Tests:

Test Validity:

The validity of the tool's experimental scores in relation to the genuine scores once guessing effects are corrected is known as self-validity, and this is how the researcher ascertained the test's validity. As a result, the factors or standards to which the performance validity is attributed are the actual tool scores.

Test Reliability:

Test reliability is the property that results received from a test that is performed on a sample once and then repeated on the same sample under the same conditions will be the same.

Since the test-retest approach is one of the best for testing dependability, the researchers employed it to determine the reliability coefficient. The Pearson's simple correlation coefficient was employed to assess the reliability of the test.

The reliability coefficient for the scoring test was 82%, and the self-validity coefficient was 89%. The tabulated value was (43) at a significant level of (0.05) with a degree of freedom (19), confirming that the test has a high degree of reliability.

Field Research Procedures:

Pilot Study:

The researcher conducted this experiment to test the basic skills on a sample of (8) students from the research community.

Pre-tests:

At the Biotechnical College field, the research sample was used for the pre-tests. To guarantee similar settings as feasible during the post-tests, the researchers standardized the test protocols, the supporting team, and the conditions. After a thorough explanation, the scoring test was used, and the results were recorded in accordance with the guidelines and criteria of the test.

Main Experiment:

The research sample was used in the primary field experiment. It consisted of ten instructional units spread over ten weeks, each lasting ninety minutes, and was taught utilizing a competitive approach. The college's football course instructors collaborated with the experimental group.

Post-tests:

The post-tests were conducted on the research sample, following the same conditions and procedures as the pre-tests.

Statistical Methods:

The researchers used the following statistical methods to process the results:

Mean (Arithmetic Average)

$$\bar{x} = \frac{\sum x}{n}$$



Standard Deviation

$$\text{Percentage} = \frac{\sum x^2 - (\sum x)^2}{n} \times 100$$

$$\% = \frac{\text{Part}}{\text{Whole}} \times 100$$

Pearson Correlation Coefficient

$$r = \frac{n \sum xy - \sum x \sum y}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Statistical (T) Test for Significance of Differences between Paired Means

$$t = \frac{\bar{d}}{\frac{s_d}{\sqrt{n}}}$$

"Where:

\bar{d} = Mean of the differences

$\sum d^2$ = Sum of the squares of the deviations from the mean of those differences

n = Number of individuals

Percentage of Improvement (3):

The difference between the pre-test and post-test means $\times 100$

-Presentation,

Analysis, and Discussion:

presenting and evaluating the findings from the research sample's pre- and post-test skill assessments in order to find differences in the mean scores from these assessments, calculate the percentage of improvement in those skills, and process the data using statistical laws in order to extract the necessary percentages as shown in Table (2)."

Test	Measurement Unit	Pre-test Mean	Pre-test SD	Post-test Mean	Post-test SD	Mean Difference	Improvement Percentage
Shooting	Score	16.3	1.8	20.6	0.9	4.3	26.38%
Handling	Score	15.2	1.7	21.5	0.8	3.32	24.35%

Table (2) clearly shows the pre- and post-test mean values, standard deviations, mean differences, and improvement percentages for the research's shooting skill. Given a pre-test mean of 16.3 and a post-test mean of 20.6, with a standard deviation of 1.8 and 0.9, respectively, for shooting skill, the mean difference between the two tests was 4.30, and the improvement percentage was (26.38).

Table (3)



Test	Measurement Unit	\bar{d}	$\sum d^2$	T_{computed}	T_{critical}	Significance
Shooting	Score	3.7	52.3	10	20.9	Significant
Handling	Score	2.7	50.3	9	2.09	Significant

The critical value for a significance level (α) of 0.05 is 2.09, while the degree of freedom is 19. Table (3) makes it clear that the computed value (T) is 10 and that the mean difference value for shooting skill selection is 52.3. With 19 degrees of freedom and a significance level of 0.05, the computed (T) value is higher than the critical (T) value of 2.09, indicating that there are significant differences in shooting skill between the pre- and post-tests that favor the post-tests.

Discussion of Results:

The data shown in the preceding tables make it clear that there are statistically significant differences, favoring the post-test, between the pre- and post-tests for shooting skill in the research sample. This illustrates the effect of applying the workout approach, which was included to the College of Biotechnology/University of the Tigris first-stage student curriculum, on improving football shooting ability. The scientific planning and appropriate organization define this approach. According to Taha Ismail et al. (1989), to guarantee a favorable effect on the player's level and continuity in many parts of football, training in football entails planning, organization, and continuity based on scientific principles. This is consistent with building up to a higher degree of exercise gradually and scheduling repetitions appropriately.

The thrill, excitement, and performance high that come with competing are what the researchers believe to be responsible for the gain in shooting ability. This outcome is in line with the research conducted by Mokarem Helmi et al. (2000), which found that incorporating games and exercises into physical education lessons stimulates the neurological and physical systems and has a positive impact on the development of psychological aspects. It also makes the delivery of the lessons joyful and enjoyable, which encourages students to practice sports and becomes motivating.

In order to get the highest level of harmony and help the student perform the skill in a way that is consistent with its goal, performance development primarily rely on the repetition of the skill and the number of successes and failures. The researchers' goal was to teach players how to perform under actual game situations by having them execute a smart shooting performance within the competitive style of the game. The researchers think that the research sample's superiority can be attributed to the critical role that the technique of carrying out various shot types played. This competition met the benchmark set by the research and was completed at that level.

Conclusions:

Through the presentation, analysis, and discussion of the results, the researchers concluded:

1. The competitive approach effectively influences the growth of football shooting proficiency.
2. Practicing shooting techniques during play and competition times shortens learning curves, saves time, and enhances performance accuracy because competition demands precision and focus.
3. The degree of skilled and motor performance is positively impacted by the application of methods and approaches in the acquisition of football skills.

Recommendations:

Based on the researchers' conclusions, the following recommendations are made:

1. The need for physical education students, particularly those in the early stages, to develop motor skills in a variety of ways, including fundamental football abilities.



2. Put your attention on mastering the fundamentals of football via the competitive approach, as it will help you become a better football shooter.
3. The necessity for researchers to examine every football skill in order to determine the best strategy or technique for enhancing skill performance.
4. Carry out comparable research employing alternative techniques, such teaching fundamental football skills mentally.

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