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## The impact of mental imagery strategy on developing some basic futsal skills for female students

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### Abstract

This article is alternative that examines the impact of how a course teacher facilitates 3rd year female students in Al-Qasim Green University to developing some soccer skills. The investigator conducted a pre- and post-test design with matched groups (all nonequivalent). This research was conducted on 30 females from the College of Physical Education and Sport, Al-Qasim Green University. The study sets were selected using simple random picking. The study found that: -The post-test score of the experimental group is statistically significant compared to the control group in passing, stopping, and overall skill for some basic futsal skills. One of the most important things the experts said was Make a big deal out of the mental picture strategy because the researcher saw that it made subjects more enjoyable and increased the wish of doing better in them.

**Keywords:** Mental imagery strategy, futsal skills development, female students

### Introduction

A competent instructor is one who can diversify their teaching methods and techniques, introducing the latest advancements in their field to alleviate the boredom and frustration students often experience during their development. This boredom often stems from using a uniform approach for all students, which may hinder successful development. Students are significantly influenced by the instructor's methods, which are based on experimentation and application, unlike development methods that are ineffective and fail to foster creativity, competitiveness, and a desire for improvement. One developmental strategy that achieves this goal is the use of mental imagery, which has become a cornerstone of the development process today, fulfilling the aspirations of both the instructor and the student.

Futsal is an exciting and beloved team sport for both young and old. Its widespread popularity, compared to other sports, has garnered significant attention due to its thrilling and fast-paced nature. This has led some to call it a sport of diverse talents, requiring a high level of physical and motor skills. It is well known that futsal is a sport that comprises several fundamental skills, which the instructor is required to develop and impart to the students, ensuring their skill performance is enhanced. This is achieved with appropriate and suitable methods that align with the students' nature, inclinations, and desires, leading them to a high level of proficiency and effectiveness, ultimately achieving the desired goals.

The foregoing highlights the importance of the research strategy of mental imagery, which is more advanced and influential on students' performance. This strategy accompanies futsal skills activities, demonstrating its effectiveness and impact on the developmental process for third-year students through the optimal use of time and effort. Furthermore, it contributes to enriching the instructor's practical approach, enabling them to successfully implement the development process and keep pace with the scientific advancements in this sport.

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### Research problem

In line with modern developmental trends that call for innovation in teaching methods, this study aims to experiment with new teaching approaches that enrich the development process. Futsal is a relatively new sport for female students, and their limited knowledge and

experience of it before entering college may explain their weak skills. This lack of experience has led to low motivation to play, either due to the perceived difficulty of the sport or the use of traditional methods. This lack of familiarity hinders the accurate assessment of the reasons for their poor performance.

After reviewing various teaching methods, the researcher found no evidence of the use of mental imagery in teaching. This prompted the researcher to explore its application, focusing on information acquisition and adding an element of excitement and engagement, which is often lacking in traditional teaching methods that lead to student boredom, disengagement, and a lack of focus on the subject matter.

Therefore, the researcher decided to conduct an experimental study using mental imagery, a modern technique employed in futsal teaching, to assess its impact on developing certain fundamental skills, particularly passing and stopping.

### Research Objective

- The teaching style of the coach and its role in developing basic futsal skills for third year female students at Al - Qasim Green University in the department of physical education and sports sciences.
- **Research questions:** The mental picture approach coupled with how the course teacher approaches the teaching of affect negatively influencing aiding third year female students in learning certain basic soccer skills at Al-Qasim Green University.
- **Study areas:** The human domain: The third stage female students Al-Qasim Green University/ Physical Education and Sport Sciences College. –
- **Time area:** (1/10/2023) to (15/4/2024)
- **Spatial field:** Al-Qasim Green University Hall, Department of Physical Education and Sports Sciences, Al-Qasim Green University.

### Theoretical Studies

#### Mental Imagery Strategy

The mental imagery strategy is one of the most important teaching elements. It helps clarify and explain many ideas that are difficult to express in writing. It also helps students visualize scientific content accurately; aligning with the author's intended meaning. Furthermore, it contributes to understanding a great deal of information and grasping complex ideas and facts that might be difficult to understand through words alone. It is a means of expressing facts visually, defined as a developmental tool through which the teacher or instructor expresses the ideas of the subject matter using a combination of points, lines, columns, symbols, and words (Hamdan Muhammad Ziyad. 1986) <sup>[2]</sup>.

The mental imagery strategy is used to convey information effectively and engagingly. It performs several functions, such as bringing reality closer to the students, presenting familiar and unfamiliar objects, and helping them understand abstract concepts (Williams, Linda Farley. 1988) <sup>[10]</sup>.

The use of mental imagery is limited in clarifying the sequence of steps for implementing developmental activities, by increasing attention to training students in drawing visuals (mental imagery strategy) as a form of organized language through a deliberate method, and that numerous, deliberate, planned, and systematic efforts are made to achieve this. The mental imagery strategy is useful in clarifying the steps for implementing developmental activities by illustrating each step in a drawing separately without verbal explanation (Khamis Muhammad Atiya. 1992) <sup>[5]</sup>.

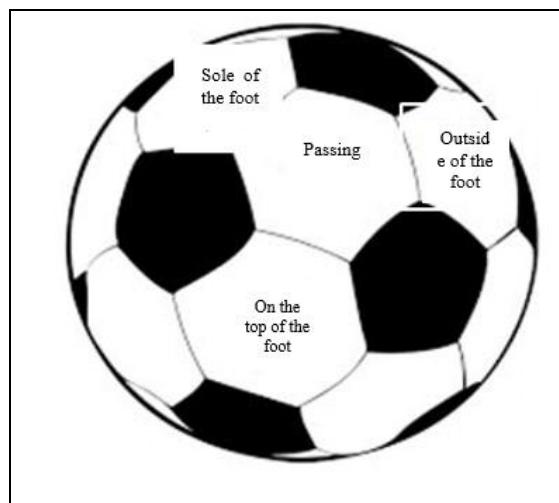


Fig 1

The student can translate ideas and information into a visual representation that facilitates memorization of the skill by designing a diagram that illustrates their understanding of the skill. This diagram will be imprinted in the student's memory, and they can label it with the elements, types, or images of the skill. For example, the passing skill in futsal is divided into, passing, which is further divided into:

Stopping, which is further divided into:

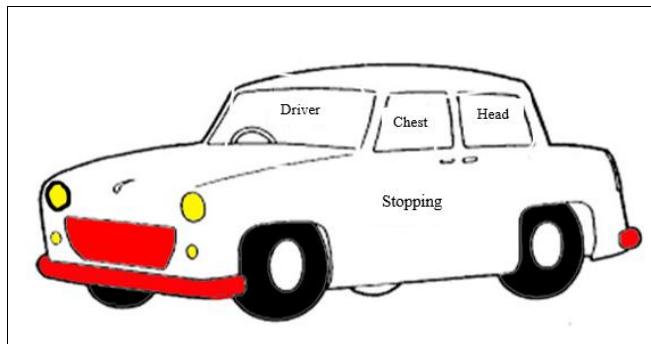


Fig 2

#### There are several definitions of the mental imagery strategy

- A lot of different information can be translated, analyzed and understood using the mental picture technique and it turns out all to come together to give useful science results (Mayer, R.E., and Gallini, J.K. 1990) <sup>[6]</sup>.
- It consists of illustrative images through which the teacher or student can translate ideas and information into illustrative images, facilitating the process of memorization, comparison, understanding the relationships between these values, and drawing conclusions effortlessly and in a short time (Taima, Rushdi Ahmad. 2003) <sup>[8]</sup>.
- It is a means of expressing facts visually and is defined as a developmental tool through which the subject teacher or instructor expresses the ideas of the subject matter using a combination of points, lines, columns, symbols, and words.

#### Passing

Passing is one of the most important skills in futsal, as it is the foundation upon which the game is based. It is the first skill a player uses to start a game and is the most frequently used skill. Therefore, developing it is essential and important.

- Deep passes:** These are made towards the opponent's goal and are dangerous if used at the right time. They require exceptional skill and precise timing to be successful.
- Cross passes:** These are used to change the direction of play in the main attacking area.

In futsal, short ground passes are preferred. They are among the fastest passes because they reach the teammate quickly. They are also preferred due to the small playing area and are frequently used because the receiving player can easily control the ball, leading to attacks being executed in the shortest possible time.

### Stopping Skill

Stopping is a fundamental skill in futsal that all players must master. Without it, a player cannot properly control, pass, or dribble. This skill is of paramount importance, as the performance of most other skills depends on the ability to receive and control the ball. It is a crucial element of ball control (Hassan Abdel-Gawad. 1980) [4]. A complex skill must be mastered from the early stages of development because if a beginner doesn't master it in the initial stages, this error will persist into higher levels. (Muhammad Abdel-Hussein Al-Maliki. 2005) [7] Stopping is defined as "the player's ability to absorb the incoming ball in front of them with the appropriate portion, quickly and with minimal effort." (Youssef Lazem. 1999) [11] It is also defined as "the player's control over all incoming balls, whether ground, high, or semi-high, within the framework of the rules of the game." (Hanafi Mahmoud Mukhtar. 2001) [3].

The researcher believes that stopping is the act of stopping and controlling the ball as it approaches a player. It is a fundamental skill in futsal, requiring mastery from every

player, as other skills cannot be executed correctly without it. The stopping skill is broad and multifaceted, involving all parts of the body except the hands. A skilled player can catch the incoming ball as quickly and efficiently as possible, using the appropriate part of the body for passing, dribbling, or stopping. Therefore, this skill demands rapid and precise timing, as well as keen awareness of the various body parts involved. Any error in stopping can lead to a missed opportunity and the loss of an irreplaceable goal (Zuhair Qasim al-Khashab *et al.* 1999) [12].

### There are several types of stopping, including:

- Instep stopping
- Outside stopping
- Instep stopping
- Bottom stopping (specific to futsal)
- Controlling the ball with different body parts (head, chest, knee).

The researcher believes that successfully controlling and mastering the ball is the surest way to open the door for the next skill. This means that in futsal, it initiates a new attack. However, if the control is incorrect, it will lead to losing possession and then switching from attack to defense, thus giving the opposing team an opportunity to attack.

### Research methods and steps used in this field

#### Research Methodology

The researcher chose to use the experimental method because it was best suited for his type of study and this method can generally provide very accurate results. The researcher used similar groups which was pre-test and post-test as indicated on the table (1).

**Table 1:** Shows the experimental design of the research.

Groups	Pre-tests	Experimental treatment	Post-tests
Experimental group	(Stopping,passing)	Mental Imagery Strategy	(Stopping,passing)
Control group	(Stopping,passing)	The Methodology Used by the Course Instructor	(Stopping,passing)

### Community and sample research

(One of the essential considerations in scientific research is selecting a sample that accurately and truthfully represents the original population. The sample selection process is strongly related to the kind of research that is carried out because in some way, it turns out to be a mini-version of the community on which the researcher focused. (Wajih Mahjoub, 2002) [9].

Accordingly, the sample consisted of third year female students at College Physical Education and Sports Sciences, Al-Qasim Green University in 2023-2014 academic year.

The research was conducted on the 30 girls from the Faculty of Physical Education and Sport Sciences at Al-Qasim Green U were selected using simple random sampling, as follows:

**Table 2:** Shows the suitability of the proposed domains for representing the development of some skills in football.

Proposed domains	Number of degree	Number of disagree	Calculated chi-square value	Tabular	Type sig
Passing skill	12	0	12	3,84	sig
Stopping skill	12	0	12		sig

### Final Application of the Achievement Test (Pre-Test)

After completing the test preparation procedures for the Futsal course for On January 10, 2024 the experimenter tested a first main experimental group of 20 female participants. These students were third year females at College of Physical Education and Sports Sciences, Al-Qasim Green University, and the test was conducted for the academic year 2023–2024. They divided themselves into two groups, comprised of 10 students per group and labeled the experimental and control group.

### Futsal Skills Tests

Tests are an effective tool for determining individual performance levels and tracking progress. A test is a method or procedure whereby an individual is presented with a set of demands to which they must respond independently of others (Afaf Abdel Karim. 1990) [1].

After reviewing several dissertations, theses, and measurement and evaluation sources related to the skills tests under investigation, the researcher developed a questionnaire to identify the most important tests for basic futsal skills. This questionnaire was then presented to a group of experts and

specialists. Following the selection of standardized tests for each skill, which are used in several of our colleges and schools, the following criteria were considered: the nature of the performance, the feasibility of implementation, the time required to complete the tests, their difficulty level, their discriminatory power, and the fact that most of them were developed using high scientific standards by previous researchers. After collecting and analyzing the data, the test with the highest score for each skill under investigation was selected.

### Post-Test

Following the completion of the development program on

**Table 3:** It displays the standard deviations, t-values, and mathematical means for the control group's test scores before and after.

Variables	Pre-test		Post-test		T value calculated	Type Sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
Passing	2,11	1,49	4	1.095	4	Sig
Stopping	1.603	0.663	4.2	0.748	5.237	Sig

\*The tabulated t-value (1.833) was found at 9 degrees of freedom and a significance level of 0.05.

For the controlled group, the pre-test of passing skill had a mean  $\pm$  SD of  $2.11 \pm 1.49$  during test execution phase (see Table 3). The mean was 4 and the standard deviation was 1.095 after the test. The observed t-value was higher than reported t-value of 1.833 (critical value at 0.05 significance level and d.f. =9). This demonstrates a statistically significant difference in ability to pass among the pre- and post-test score, with the post-test being superior.

For the standard condition group: The mean score on the pre-

January 20, 2024, post-tests (final tests) were conducted for both the experimental and control groups, taking into account the conditions of the pre-tests in terms of location, time, and method of administration, with the assistance of the support team, as follows:

Both groups together: Experimental group: Skills test on the morning of Tuesday, February 30, 2024; Control group: Skills test on the morning of Tuesday, March 2, 2024.

### Results and Discussion

#### Presentation of pre- and post-test results for the control group on the research variables

**Table 3:** It displays the standard deviations, t-values, and mathematical means for the control group's test scores before and after.

Variables	Pre-test		Post-test		T value calculated	Type Sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
Passing	2,11	1,49	4	1.095	4	Sig
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\*The tabulated t-value (1.833) was found at 9 degrees of freedom and a significance level of 0.05.

test of stopping skill was 1.603 (s.d. = 0.663). It was 4.2 and 0.748 after the test. The t-value for this was 5.237, which is greater than the critical t-value of 1.833 at a significance level of 0.05 with 9 degrees of freedom. This indicates a significant change in the stopping skill from pre-test data to post-test data, which was positive in the post-test.

#### Presentation of the pre-test and post-test results for the experimental group in the variables

**Table 4:** Gives the means, standard deviations, and estimated and key t-values for the pre-test and post-test results of the study factors in the experimental group.

Variables	Pre-test		Post-test		T value calculated	Type Sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation		
Passing	1.803	1.56	7.5	3.981	9.789	Sig
Stopping	1.71	0.9	6.8	0.933	8.921	Sig

\*The tabulated t-value was 1.833 at 9 degrees of freedom and a significance level of 0.05.

The average pre-test score on passing skills in the experimental group was 1.803 with a standard deviation of 1.56. The mean score was 7.5, while the standard deviation was 3.981 following the test. At 95% level of significance and with 9 degrees of freedom the computed t- value is 9.789 which is greater than tabulated value, this being a two-tailed test; its tabulated value will be only 1.833. This indicates a statistically significant difference between pre- and post-test scores regarding passing skill level where the average score in the post-test is higher.

In the experimental group, on pre-test, mean score of

elimination skill is 1.71 and its standard deviation is 0.9. Following the test, the mean was 6.8 and standard deviation was 0.933. Under the 0.05 significance level and file 9 degrees of freedom, the critical value of t was determined as 1.833. That is why the t-value that was calculated (8.921) was significant. This demonstrates a statistically significant difference in extinction performance across pre-test and post-test, with greater scores on the post-test.

#### Presentation of Post-Test Results for Experimental and Control Groups on the Investigated Variables:

**Table 5:** Show the section presents the means, standard deviations, and calculated and critical t-values for the post-test results of the research variables for both the control and experimental groups.

Variables	Experimental		Control		T value calculated	T value tabular	Type sig
	Arithmetic mean	Standard deviation	Arithmetic mean	Standard deviation			
Passing	7.5	3.981	4	1.095	2.55	1.734	Sig
Stopping	6.8	0.933	4.2	0.748	6.66	1.734	Sig

\* With a significance level of 0.05 and 18 degrees of freedom, the t-value in the table was 1.734.

Passing Skill: The experimental group's average post-test score was 7.5, the standard deviation was 3.981. In the post-test for the control group, the mean score was 4 and the standard deviation was 1.095. The calculated t-value was 2.55, which is greater than the tabulated t-value of 1.734 at a

significance level of 0.05 and 18 degrees of freedom. This indicates a statistically significant difference between the post-test scores of the experimental and control groups in passing skill, favoring the experimental group.

Stopping skill: The experimental group had a mean of 6.8 (SD

= 0.933) in the post-test. The mean for the control group was 4.2 with a standard deviation of 0.748. The stopping skill post-test preference for the experimental group is significantly higher than that of the control group. This is because (t) was found to be 6.66, which is significantly greater than the table value of (1.734).  $T_0 = 0.05$ ,  $df = 18$ .

## Conclusion and Recommendations

### Conclusion

- The experimental group outperformed the control group in the post-test for passing, catching, and skill performance in some basic futsal skills.
- The mental imagery strategy helped increase students' self-confidence by allowing them to create images that demonstrated their understanding of the subject matter.
- The test results proved the effectiveness of the developmental units prepared by the researcher, as evidenced by the clear improvement in performance.

### Recommendations

- Emphasize the use of the mental imagery strategy, given its importance in adding enjoyment and a desire for improvement to any subject matter, as observed by the researcher during the experiment.
- Guide the instructor to avoid limiting themselves to traditional methods and to diversify their teaching approaches, including the use of mental imagery strategies, which are modern methods proven effective in development by numerous studies.
- Conduct similar studies for other sports skills and games.

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