



# The Impact of Guided Inquiry Model on Acquiring Soccer Trapping and Passing Skills for College Students

Mohammed Nasseer Falih

General Directorate of Education in Al-Qadisiyah/ The Open Educational College Al-Diwaniyah Study Center

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\*Correspondence: Mohammed Nasseer Falih

Email: [mohammadfalih1964@gmail.com](mailto:mohammadfalih1964@gmail.com)

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**Abstract:** The purpose of the investigation was to determine the effect of Guided Inquiry Model on teaching football trapping and passing skills. 1.1. Objective of the Study. The goal was also to establish the difference between experimental and control groups of specifications. The researcher employed an experimental design that utilized both pretest and posttest. The participating section consisted of (150) students who are the first stage in the College of Physical Education and Sports Sciences for the year 2025-2026 are distributed over the six sections. A total of 40 students were taken as the primary experimental sample from sections D and F. They were divided into two groups (Experimental group (20 students) – Control group (20 students). After the pretesting, the experimental group received treatment in the form of training consisting of 8 educational units based on the Guided Inquiry Model, which was implemented at the rate of 2 units per week. The results showed that this research proven the Guided Inquiry Model contributes to learning catching and passing the ball skills. Additionally, the model also assists students to build knowledge and cognitive engagement through the learning activity. The study's recommendation to teach the football skill of trapping and passing is to use the educational curriculum of Guided Inquiry Model. It further recommends conducting additional investigations to assess the appropriateness of this model on additional team sports.

**Keywords:** Guided Inquiry, Trapping, Passing, Soccer

## Introduction

Modern educational strategies and methods require instructors to possess high levels of expertise to achieve learning objectives. Educators must carry a vast wealth of ideas, information, experimental experiences, and scientific hypotheses aimed at analyzing and predicting the learning process. These studies have gained increasing importance in the modern era—an age of information revolution and rapid advancements in education—prompting those in charge of the educational process to employ modern scientific theories to realize desired pedagogical goals.

The concept of a "Model" represents a relationship that connects several factors, acting as a generalization, interpretation, or explanation of various observations or phenomena that can be observed and repeated over time (Kifah Yahya Saleh Al-Askari et al., 2012, 8-9). At the beginning of the twentieth century, Behaviorism played a primary role

in education, focusing on modifying observable behavior. However, modern strategies and methods have shifted toward Constructivist Theory across all subjects, including the sports field. Numerous contemporary theories have emerged, placing the learner at the core of the educational process and shifting the focus from passive reliance to self-reliance under the guidance of the instructor. Modern pedagogical models emphasize diverse instructional strategies that foster interaction between the learner and the environment. Here, the educator acts as a facilitator, preparing a rich interactive environment—particularly during educational units—while attending to individual characteristics such as intelligence and motivation. This ensures that learning becomes an internal process of knowledge construction rather than mere observable external behavior, avoiding rote learning by focusing on mental capacities through thinking, analysis, and problem-solving—skills that align with the requirements of Colleges of Physical Education and Sports Sciences.

" In inquiry-based learning classrooms, students are active and problem-solving oriented, requiring focus, attention, and teamwork rather than being passive recipients. Teachers act as facilitators or supporters of learning rather than mere transmitters of scientific knowledge" (Ayesh Mohammed Zaitoun, 2007, 23). Therefore, the instructor bears the significant responsibility of being fully versed in modern theories and strategies, adopting logical inquiry and research practices to acquire knowledge through educational units. Inquiry transforms the student from a passive recipient into an active participant who analyzes, interprets, and organizes information using thinking and application skills. This transition to self-directed learning is a hallmark of the Inquiry Model, which gradually transfers responsibility to the student while reducing teacher support, culminating in independent practice within new learning situations.

Football is the most popular and famous game in the world. The game must require ongoing development in connection. Educational Institutions are where development of this game starts. The teaching and training of basic skills of collective sports take place mainly in educational institutions.

There are a number of basic skills that you can learn at the beginning of the learning process. Examples include ball trapping, ball passing, etc. It is the duty of the instructor to implement a strategy or method which best teaches these capacities according to the mental, physical and motor capabilities of the student.

To provide an interactive room related to science and education knowledge, the research chooses the Guided Inquiry Model. This research is really significant. This model is in line with the latest evolution of cognition and education standard. The objective in this research is to design teaching units based on Guided Inquiry to learn Trapping and Passing football skills and to analyze the impact of this teaching model on the learners.

### **Research Problem**

The relevance of the research problem is determined by the demand to identify advanced teaching strategies methods and approaches in the educational process. The researcher believes that the Guided Inquiry Model has a much greater contribution in the

implementation of plain traditional techniques. Therefore, the researcher tries to implement the Guided Inquiry Model. The initial question gives clarity to research problem.

"What is the impact of the Guided Inquiry Model on learning the skills of trapping and passing in football for university students" ?

### Research Hypotheses

1. Creating a teaching unit based on the Guided Inquiry Model for trapping and passing soccer skill learning in students.
2. The purpose of this research is to determine whether the Guided Inquiry Model affects student's acquisition and learning on skill trapping and passing football

### Methodology

#### Research Design

As part of the study experimental and control groups have been used. The existing pre-test and post-test measures were adopted in the study to suit the problem of the study.

#### Research Population and Sample

The researcher took a sample from (150) first-year students in the College of Physical Education and Sports Sciences/University of Al-Qadisiyah for the academic year 2025-2026, from (6) sections.

For the current study, the researcher opted to utilize the simple random sampling method for sample selection. Conducted study on 40 students. 20 Students Control group 20 Students Experimental group sample. 20 Experimental group I.

#### Group Equivalence (Parity)

To ensure the groups were equivalent before the intervention, the researcher conducted equivalence tests using the Independent Samples T-test. The results showed that the Significance (Sig.) values were greater than the significance level of (0.05) for all tests. This indicates no statistically significant differences between the two groups, confirming their equivalence and homogeneity in the studied variables. Table (1) illustrates the results of the homogeneity and equivalence between the research groups.

**Table 1.** Homogeneity and Equivalence of the Research Groups in the Investigated Variables

No.	Control Group		Experimental Group		Homogeneity		Equivalence		Sig.
	Mean	Std.	Mean	Std.	Levine's	Sig.	t-value	Sig.	
1	4.72	0.978	4.51	0.887	1.815	0.186	0.677	0.502	Non-significant
2	5.40	0.884	5.21	0.952	0.321	0.575	0.689	0.496	Non-significant

## Research Tests

### Ball Trapping Test.

Test Name: Ball Trapping in a Limited Area (2m × 2m). (Jalil, 1991, p77)

Test Objective:

To measure the performance level of the ball trapping skill and the ability to regain control using the inside of the foot, the sole of the foot, the thigh, or the chest.

Tools and Equipment:

(5)Legal Footballs, White Chalk (Lime) for Marking ,Whistle ,( 4) Cones (Markers), Metal Measuring Tape.

Test Procedures:

1. Field Preparation: The test area is marked according to the specified dimensions (2m×2m).
2. Starting Position: The student stands behind the starting line with the ball
3. .Execution: Upon the starting signal, a teammate throws a high ball toward the student from a distance of 6 meters.
4. Movement: The student advances from the starting line into the test zone (2m×2m) attempting to trap and settle the ball using any legal part of the body (excluding the arms).
5. Completion: After stopping the ball, the student returns to the starting line. This process is repeated for (5) consecutive trials.
6. Technical Rules & Scoring Conditions: The ball must be completely controlled and stopped within the designated test area

At least one foot must be inside the square during the trapping process.

If the ball is thrown incorrectly by the assistant (the thrower), the trial is voided and repeated without being counted.

The ball is thrown using an from bottom to top. A trial is considered failed in the following cases.

1. If the student fails to stop or gain full control over the ball.
2. If the student crosses any of the boundary lines of the test area during execution.
3. If the ball is stopped using any method considered illegal according to the Laws of the Game in football.

### Scoring Method

- 2 points per successful attempt.
- Zero points are given for each failed attempt.
- The final score is calculated as the sum of the five trials, totaling (10) points.

**The Second Test: Passing from a Distance of 15 Meters.** (Zuhair Qasim et al.: 1990, 47)

### Test Description:

Passing the ball toward three concentric circles marked on the ground, with diameters of (3m, 5m, and 7m) respectively.

**Test Objective:**

To measure the performance level of the passing skill.

Required Tools and Equipment:

(5) Footballs, White Chalk (Marking Powder), Metal Measuring Tape.

**Test Description:**

**Field Layout:** Three concentric circles are marked on the ground with diameters of (3m, 5m, and 7m) respectively, **Starting Line:** A starting line, (5m) in length, is designated at a distance of (15m) from the center of the circles.

**Execution:** The player stands behind the starting line and performs five consecutive passes, attempting to land the ball within the innermost (center) circle using either foot.

**Scoring Rule:** If the ball touches a shared line between two circles, the higher score is awarded.

**Trials:** The player is given one attempt (consisting of the five passes).

**Scoring Method:**

Points are calculated as follows:

**-3 Points:** Awarded if the ball lands inside the innermost (center) circle.

**-2 Points:** Awarded if the ball lands inside the middle (second) circle.

**-1 Point:** Awarded if the ball lands inside the outer (third) circle.

**-Zero:** No points are awarded if the ball lands outside the circles.

**The Pilot Study:**

The researcher, along with the assistant research team, conducted a pilot study on a sample of (20) students selected from the research population. The sample was chosen using the simple random sampling method (via lottery) from Class (D).

The first test was administered on Sunday, November 30, 2025. To ensure the reliability of the tests, a re-test was conducted seven days later on the same sample on Sunday, December 7, 2025.

The pilot study was conducted to achieve the following:

1. **Equipment and Facility Readiness:** To ensure the safety and functionality of the devices and tools. This included pre-marking the test areas and preparing all necessary equipment (cones, balls, marking, and stationery/scoring sheets).
2. **Timing Estimation:** To determine the total time required to administer the tests for each participant.
3. **Assessing Assistant Competency:** To evaluate the efficiency and coordination of the assistant research team.
4. **Scientific Foundations:** To establish the scientific validity (Validity, Reliability, and Objectivity) of the tests, this will be detailed in the following sections.
5. **Suitability and Difficulty Level:** To verify the appropriateness of the tests for the research sample. The results confirmed that the difficulty levels were suitable for the participants' abilities.

### Scientific Foundations of the Tests:

#### Validity:

- To ensure the Validity of the tests, the researcher presented a specialized questionnaire to a group of experts and specialists in teaching methodologies and football. Based on their evaluations and consensus, the Content Validity (Face Validity) of the tests was established.
- Achieving high validity is a fundamental requirement for this study, as it is considered one of the most essential characteristics of a high-quality scientific test, ensuring that the instruments accurately measure the variables they were designed for.

#### Reliability:

To evaluate the level of reliability, test-retest method was used in this study. Initially given the subject material as the same material, the same tests were given seven days after the same condition was removed. In order to derive the correlation coefficient for this test, we computed the Pearson correlation coefficient ( $r$ ) on the scores of two sessions. The first session was executed on 25th November, 2025, the second session was executed on 1st December, 2025. Tests are highly reliable, as seen in table (2), the results show.

#### Objectivity:

To find out the Objectivity of the skill tests (Passing, Dribbling and Trapping), the investigator requested the help of two independent judges (evaluators) to record the scores of the tests. The Pearson Correlation Coefficient was utilized to correlate the two judges' scores. All tests were found to be very objective, which proves the checking system clearly and absence of subjectivity in it. Findings can be obtained in table (2) of this paper.

**Table 2.** Reliability and Objectivity Coefficients for the Skills Tests Under Study

No.	Skills Tests	Reliability	Sig.	Objectivity	Sig.
1	Ball-Trapping (Settle)	0.896	0.001	0.923	0.001
2	Passing Test (15m)	0.904	0.001	0.923	0.001

Significant at ( $P < 0.05$ ) level

The educational units were implemented using the Guided Inquiry Model to teach football skills (Ball Trapping and Passing) to the students in the experimental group. The program consisted of (8) educational units conducted over (8) weeks, with one unit per week. The program commenced on Thursday, December 14, 2025, with the first unit applied to the experimental group, and concluded on Monday, February 12, 2026. Each educational unit lasted (90) minutes. The work followed the steps of the Guided Inquiry Model, specifically within the Main Part of the units, which included both Instructional (Learning) and Applied (Practical) phases. The division was as follows:

First: The Preparatory Part (18 Minutes): It includes the introduction and warm-up (both General and Specialized).

Second: The Main Part (63 Minutes): It consists of the following two phases:

1- The Instructional Phase (20 Minutes): This phase includes the first two steps of the Guided Inquiry Model.

- Step 1: (10 Minutes) In this step, the skill to be learned is explained, and a demonstration (model) is presented by either the instructor or one of the students. This is accompanied by activating the student's prior knowledge and linking it to the current skill.
- Step 2: (10 Minutes) The instructor breaks down the skill into several parts or progressive steps. Students are actively involved in identifying the challenging aspects of the skill and are encouraged to think critically about the mechanics and methods of execution.  
The Applied Phase (43 Minutes): This phase includes the subsequent steps of the Guided Inquiry Model, focusing on the practical implementation and exploration of the skills.
- Step 3: (10 Minutes) during this stage, the students are divided into various formations and groups to practice the skill. This allows for diverse organizational setups that facilitate the practical application of the movements learned.
- Step 4: (10 Minutes) During this step, the teacher gives students technical feedback. Afterwards the student can apply the feedback in practice and correct mistakes in execution and other technical errors..
- Step 5: (13 Minutes) The instructor does not intervene during the practice. It is the student's own practice. Students carry out the practice required to master the skill which the teacher checks for correctness and proficiency..
- Step 6: (19 Minutes) Moving from the existing instructional setting to a new task or a more sophisticated application not previously encountered was integrated into the instructional activities. The purpose of this is integrating the learned skill into new and difficult contexts..

The Concluding Part (9 Minutes): This section consists of cool-down and relaxation exercises to gradually return the physiological and physical states of the students to normal after such an intensive activity..

### The Main Experiment:

After the completion of the educational program, the researcher conducted the post-tests for the target skills (Ball Trapping and Passing) on Wednesday, the 19th of February 2026. To maintain the scientific discipline of the results, the researcher preserved the conditions for conducting post-tests in terms of place, time and same assistant research team under the supervision of the researcher as was the case with pre-tests.

After the tests, data for experimental and control groups were entered into new standardized scoring sheets. Following this, the results were processed in accordance with statistics for the analysis of findings and the objectives of research.

## Result and Discussion

### Presentation of Statistical Results for the Pre-tests and Post-tests of the Control Group.

**Table 3.** The differences between the pre-tests and post-tests in learning football skills (Ball Trapping and Passing) for students in the Control Group.

No.	Variable	Unit	PRE		POST		Mean Difference	SD Difference	T-Value	Sig.
			Mean	SD	Mean	SD				
1	Ball Trapping	Degree	2.401	0.503	4.851	0.746	2.450-	0.887	12.353	0.000
2	Passing	Degree	7.852	2.059	9.001	1.258	1.150-	1.725	2.982	0.005

Significant at ( $P < 0.05$ ) level

### Presentation of Statistical Results for the Pre-tests and Post-tests of the Experimental Group.

**Table 4.** Comparison of Pre-test and Post-test Results for the Experimental Group in learning Football Skills (Trapping and Passing)

No.	Variable	Unit	PRE		POST		Mean Difference	SD Difference	T-Value	Sig.
			Mean	SD	Mean	SD				
1	Ball Trapping	Degree	2.452	0.510	6.501	1.147	4.050-	0.945	19.178	0.000
2	Passing	Degree	8.451	1.467	10.749	1.020	2.300-	2.055	5.008	0.000

Significant at ( $P < 0.05$ ) level

### Presentation of Statistical Results for the Post-tests of the Control and Experimental Groups.

**Table 5.** The differences between the Post-tests of the Control and Experimental groups in learning Football skills (Ball Trapping and Passing) for students.

No.	Variable	Unit	PRE		POST		T-Value	Sig.
			Mean	SD	Mean	SD		
1	Ball Trapping	Degree	6.501	1.147	4.851	0.746	15.955	0.000
2	Passing	Degree	10.749	1.020	9.001	1.258	5.004	0.000

### Discussion of Results:

The presentation and analysis of pre-test and post-test results of basic football skills in the control experimental group show that there are significant differences between pre-test and post-test both group with post-test being higher.

In light of this evidence, the progress of both the control class and the experiment class can be ascribed to the learning model used, which in this case are the traditional methods by the teacher and the Guided Inquiry Model. Both methods resulted in a significant improvement in the skills acquired at the pretest and posttest.

### Discussion of Control Group Results:

According to the researcher, the control group's large increase in post-test result relating to learning football skills of (Ball Trapping and Passing) is due to their teacher's teaching strategy. The techniques focus on the systematic presentation of educational material and effective delivery of information and concepts to the students.

Moreover, the communicative nature of football as a spectacular sport, makes it most accessible. The students have had a brief acquaintance with the game; further, they have picked up basic notions and got introduced. Because of this experience, it makes it easier to learn these types of skills, even at a low level.

According to the process of the formations, first, explanations were given theoretically and then practically after which a good mental image of the skill execution was created in students. Constant practice and repetition in teaching units along with attendance

of students, technical feedback provided by teacher, helped to develop abilities of students and encouraged them to make more efforts in mastering basic skills. The researcher (Ayesh Mahmoud, 2007) says: “the method used by the teacher plays a positive, successful and effective role in teaching the students and creating their skill level, even if the method followed in a teacher-centered where the role of the student is repetition. Thus, information is given directly, i.e. the way in which learning takes place is when the student faces a certain demand, problem or situations. This was done according to the principle guarantees strategy of learning by the type of Behavioral Theory, where learning takes place through observation and imitation of the apparent behavior pattern”.

### **Discussion of Experimental Group Results:**

As for the experimental group, the researchers consider the insignificant statistical differences as well as the superiority over the control group due to the Guided inquiry model. The model is an effective teaching model according to current developments and will help students learn in a more student-centered environment. This model works successfully because it is able to provoke cognitive processes in students by connecting prior knowledge to learn a new skill. The learning objectives of the football skills (Trapping and Passing) is clearly spelt out in the model. This targets higher order thinking skills such as focusing, analysing and problem-solving, especially when students did not hit the target perfectly during the skill execution. Through the structured steps implemented by the instructor, the improvements above were realized during the educational stage of the lesson's main part. As a result of this systematic shift from theoretical to practical work, students were no longer mere spectators; they actively engaged in the process of acquiring skills. Consequently, they achieved a level of skill mastery that surpassed that of the previous method.

### **The Impact of the Guided Inquiry Model on Skill Acquisition**

The guided inquiry model is deemed effective as it helps students to repeat, practice, and perform completely. The reason is that the model places the student at the centre of the learning process, allowing them enough time during the units of instruction to engage with the material. According to the nature of football skills, learning develops through application (doing). We saw this effectiveness in the application (the practical part) of the main lesson which is the primary aim of the lesson unit. During this phase, the students are given plenty of time for repetition. The favorable relationships between the teacher and students, and between students produced help in education. The findings of (Magdi Aziz Ibrahim, 2004) asserted the same.

Heterogeneity in a small group (high, average, low cognitive student) makes student understand generalization and mastering concept and principle. Further, it helps students in problem-solving, scientific thinking and decision making. This model is also an advance fading or scaffolding process. It helps them in relying on their capabilities and preliminary learning once they perform the task. The Guided Inquiry Model's main goal is to enable students to discover their potency performance by themselves.

### **Self-Correction and Internalization of Knowledge:**

The researcher claims that the experimental group did better because the students were able to better access their stored information and integrate feedback. Refer to (Anwar Mohammed Al-Sharqawi, 2012).

The learners can adjust to different learning contexts and can also assess their performance. This assessment is generally based on some external information during the acquisition of skills. The learners can also carry out selfevaluation by the help of their previous perception as well as with the help of other individuals as a coach or teacher. It was also not delivered by the instructor, was the application of feedback to the Guided Inquiry Model. Thereby was provide students lots of room for self-correct. This method supports an important transition in teaching from purely external instruction to internal construction. These changes took place during the application stage of a transform lesson to enable the students to reflect on what they have learned and transferring it to their own bodies. And rectify their technical errors that occur during the execution.

According to the researcher, the steps of Cognitive Constructivist Strategy are the most crucial step in measuring the ability of students to mobilise internal knowledge. At this point, the students need Scaffolding- which refers to instructional support- to make the learning of the skill successful.

The teacher used the previous scaffolding strategy to provide this support which eventually led to Independent Practice. In this last phase, students will face “problem-solving” tasks, such as trying the drills that involve movements not previously learned. This method evaluates the student's ability to apply everything they have learned in a new situation.

As the instructor applies the Guided Inquiry Model, the experimental group will be superior to the control group, according to the researcher, which fits in a learning environment that is positive. The researchers themselves designed the different units who were exciting, suspenseful and competitive in nature. This is in agreement with (Qasim Lazam et al, 2005) who states that: “The diversity and innovation of teaching methods and styles for athletic skills are the greatest means to realize an atmosphere, full of suspense, excitement and enjoyment to contribute to the rapid learning and acquisition of athletic movements and activities”. Besides, (Mohammed and Asmaa, 2020) state that.

This learning theory clearly organizes the sequence in which the tasks are assigned. Secondly, the use of varied exercises significantly enriches the information learned by the students regarding the performance of the skills targeted. Therefore, the researcher concludes that this order of variety did not lose students’ interests. Furthermore, it also gave a wealth of information that strengthened the technique of football skills performance.

### **Conclusion**

Based on the statistical analysis and the findings of this study, the researcher has reached the following conclusions:

1. The Guided Inquiry Model is key to effectively utilizing students’ experiences in learning with football skills (Ball Trapping and Passing).

2. The Guided Inquiry Model greatly assisted in the construction of knowledge among students, particularly through its well-structured phases of critical thinking and skill-related achievement.
3. The model allows students to assess and correct their technical performance using well-stored information through immediate feedback.
4. The Guided Inquiry Model helped students solve problems within the context of various football games.
5. The students' internal processes become involved to stimulate thinking which transforms the student into an active partner in the construction of knowledge through this model.

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