

EFFECT OF THE NUMBERED HEADS STRATEGY TO LEARNING MOTIVATION AND TEACHING FOOTBALL SHOOTING SKILL FOR STUDENTS

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ABSTRACT

The importance of the research is evident in the use of the numbered heads strategy in learning motivation and teaching the skill of football shooting to students.

The research aims to identify the effect of using the numbered heads strategy on learning motivation and teaching football shooting skill to students, and to identify the significant differences between the experimental and control groups in the results of the post-tests.

The research community was determined by students of the first stage in the College of Physical Education and Sports Sciences - University of Kerbala, who numbered (107). The research sample was randomly selected from the original research community, by lottery method, with a number of (30) students, who were divided into two equal groups, with a value of (15) student for each group.

Among the most important conclusions reached by the researchers is the tiring strategy and method prepared by the subject teacher, which had a positive effect on learning motivation tests and teaching the skill of football shooting to students. The results also showed that the students of the experimental group outperformed the students of the control group.

One of the most important recommendations reached by the researchers is to emphasize the use of the numbered heads strategy in learning football skills because of its good results. Conducting similar studies in other activities and games using the numbered heads strategy for different age and school stages and for both gender.

1. INTRODUCTION:

The teaching process consists of three elements: the teacher, the student, and the curriculum. The teacher, for example, cannot do the teaching process without the student, and the curriculum in turn cannot be presented without the teacher who teaches it. Both the teacher and the curriculum have no role without a student learning that. All within an appropriate educational environment and available possibilities.

In recent years, the methods of teaching physical education have occupied an important place among the general teaching methods, because of their great importance in the progress and development of the level of physical education, as it contributes significantly and effectively to the

education of students and their building in an integrated manner in terms of physical, mental and psychological aspects.

Therefore, the traditional learning strategies and methods in which the teacher is the only source of information and the student is the recipient only are no longer compatible with the continuous developments in the field of education. Rather, the concept of the educational process has become seeking to find advanced and modern strategies in which the educational process is transferred from the teacher to the learner. The role of the teacher is to direct and guide and make the learner a vital and active element, which leads to an increase in learning efficiency and thus its impact on the level of performance, and among these strategies (the numbered heads strategy), which is considered one of the modern teaching strategies, it contributes effectively to encouraging active learning among learners and achieve results This strategy is based mainly on dividing the learners into groups of equal number of members, and these groups bear sequential numbers. The members of these groups bear similar numbers, that is, they are repeated on all groups, and they are called by this name because the members of the group put their heads together in order to make sure of the correctness of the answer to the question posed by the teacher and the holders of the relevant number provide the answer to the group as a whole.

The researchers believe that the interaction between members of the same group leads to an increase in the learning motivation of students, which is the important psychological concepts for each learner. Often qualified educators, such as teachers and trainers, seek to support the learner's motivation towards learning, believing that the individual's motivation towards learning is the key to students' access to the correct mechanism for performance and success. And that the game of football is one of the games that has witnessed a great development at the level of the countries of the world and has taken a rapid spread because it contains various technical skills that are interesting to the viewer and can be considered one of the games that work to spread the spirit of cooperation and unify the effort for the purpose of reaching the high level of sports . The field of football is one of the most important vital areas that concern the affiliates of the world of physical education and sports sciences, as it depends primarily on mastering the basic skills of the game because the basic skills are the strong pillar on which the game is built. And the skill of shooting is one of the basic skills that decide the situation in matches. A team whose members are good at accurate and precise shooting is considered one of the teams that is difficult to overcome, so the skill of shooting in football is the boundary between winning and losing. The importance of the research lies in the use of the numbered heads strategy in learning motivation and teaching the skill of football shooting to students.

Research problem:

Many of those in charge of the educational process have sought to improve the teaching process and move it to a new stage in which there is some positive interaction between the teacher and the student. Where the student has now become the axis on which the learning process revolves, and not just a future for the information dictated to him by the teacher. Also, these lessons

are offered to all students in the same way, without taking into account the individual differences between the students, their tendencies, tendencies and desires. The researchers attribute the reason for this to the failure to use modern strategies in educating students, so the researchers came to the following question? Does the strategy of numbered heads have an effect on learning motivation and teaching football shooting skill to students?

Research objectives:

- Identify the effect of using the numbered heads strategy on learning motivation and teaching the skill of football shooting to students.
- Identifying the significant differences between the experimental and control groups in the results of the post-tests.

Research hypothesis:

- There are significant statistically significant differences between the pre and post-test of the experimental and control groups in learning motivation and teaching the skill of football shooting to students.
- There are significant statistically significant differences in the results of the post-test of the experimental and control groups in learning motivation and teaching football shooting skill to students and in favor of the experimental group.

Research fields:

The human field: Students of the first stage in the College of Physical Education and Sports Sciences / University of Karbala for the academic year (2020-2021).

Time field: from 18/2/2021 to 20/4/2021.

Spatial field: Football field in the College of Physical Education and Sports Sciences / University of Karbala.

RESEARCH METHODOLOGY AND FIELD PROCEDURES:

Research Methodology

The researchers used the experimental method by designing two equal groups, the control and the experimental, with a pre- and post-test for its suitability to the nature and problem of the research.

Community and sample research:

a) Community: The research community was determined by students of the stage in the College of Physical Education and Sports Sciences / University of Kerbala, which numbered (107) students.

b) Sample : The research sample was randomly selected from the original research community, by lottery method, with a number of (30) students, they were divided into two equal groups, with (15) students for each group, and thus the percentage of the research sample is (28.03%), which is an appropriate proportion to represent the research community is a true and honest representation.

(i) The homogeneity of the sample and the equivalence of the two research groups:

Sample homogeneity: The researchers used the law of the skew coefficient to measure the homogeneity in the variables (Length, Mass , age) among the sample members, as shown in Table (1).

Table (1) The homogeneity of the research sample shows the variables (Length, Mass , age).

Variables	Unit of measure	Mean	Std. deviation	Mode	Skew ness
Length	Cm	172.43	5.97	172	0.39
Mass	Kg	74.96	7.17	83	0.25
Age	Year	20.73	1.46	20	0.78

The results of Table (1) show that the skewness coefficient values for the variables were less than (+1), which indicates the homogeneity of the sample in these variables.

(ii) Equivalence of the two research groups:

For the purpose of determining the starting point, the researchers found parity between the two groups using the (t) test for independent samples in the study variables, and Table (2) shows this.

Table (2) It shows the equivalence of the two research groups in the research variables investigated.

Variables	Control group		Experimental group		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculate d	Tabular	
Learning motivation	127.33	7.62	126.04	7.88	0.70	2.02	Non sig
Shooting skill	6.06	1.33	6.53	1.18	0.950		Non sig

By noting the calculated (t) values for the research variables, we find that they are less than the tabular (t) value of (2.02) at the degree of freedom (28) and the level of significance (0.05), which indicates that there are no significant differences and this means that the two groups are equivalent in the search variables.

Auxiliary tools and equipment:

Arab and foreign sources - note.

Auxiliary Tools

10 soccer balls - measuring tape - medical scale - chalk - whistle –wight powder - stopwatch number (2) - scientific calculator - rope to divide the goal - legal football goal.

Description of the tests used in the research:

(a) First: Learning Motivation Scale: (Ali and Ibrahim, 2016, p. 35)

The scale (Ihsan Muhammad Ali, Yasser Ahmed Ibrahim) was used, which measures learning motivation for students of the College of Physical Education and Sports Sciences, and the scale contains (36) items. The scale was presented to a group of experts and specialists in the field of physical education, and all experts and specialists agreed on using this scale to achieve (b)

Second: A test of soccer shooting skill: The football shooting skill in question was determined, and it was agreed with the three researchers to choose a test (shooting at a football goal divided by tapes into squares) as a tool to measure the accuracy of football shooting.

Football Shooting Test Description: (1)

- **The objective of the test:** to measure the accuracy of shooting the ball towards the goal.
- **Tools used:** (5) legal soccer balls, a rope to divide the goal, a tape measure, a soccer goal.
- **Test procedures:** * The balls are placed on the penalty area line and in different places. The goal is divided into nine sections by means of a rope.
- **Description of the test:** The player stands behind the penalty area line with the balls in the direction of the goal and at the start signal the player kicks the ball with his foot towards the goal to enter it into the squares drawn in the goal, then moves to the second ball and so on.
- **Register:** The scores are calculated according to the total scores obtained by the player from scoring the five balls towards the goal, as follows:
 - * (5) scores at square No. (4). * Two degrees at square No. (3).
 - * (4) scores at square No. (5). * One degree at square No. (1).
 - * (3) Scores at square No. (2). * Zero if the ball goes outside the

Note: When the ball hits the rope, the player gets the highest score.

Experimental Experiment:-

After completing the required procedures, and in order to obtain correct and accurate results in accordance with the scientific methods followed, the researchers conducted the reconnaissance experiment on Wednesday (3/3/2021), on a sample of (10) students who were not from the research sample and from the community of origin, and the target Of which.

- Identifying the difficulties that researchers face during the main experiment.
- Knowing the time allotted for testing and the safety of sports equipment.

- Knowing the requirements and times of educational units.
- Ensure the scientific bases of the tests used.

Scientific foundations tests:

(a) Validity: In extracting the validity of the tests, the researchers relied on the validity of the content by presenting the tests to a group of experts and specialists.

(b) Reliability: To calculate the reliability coefficient, the test method is chosen and the test is re-applied, and the tests were applied to a sample of (10) students from outside the research sample, and these tests were repeated after (7) days of the first tests and on the same sample.

(c) Objectivity: The tests are simple, clear, understandable and far from personal judgments, so the tests are highly objective, as shown in Table (3).

Table (3) Shows the reliability coefficient of the tests in question:

N	Tests	Measuring unit	Reliability coefficient
1	Learning motivation	Degree	0.88
2	Football Shooting skill	Degree	0.86

Field research procedures:

(a) Pre-test:

The pre tests were conducted on Tuesday 16/3/2021 on the football field in the College of Physical Education and Sports Sciences / Kerbala University for the variables under research and in the presence of the assistant work team.

(b) The general framework for implementing the numbered heads strategy:

After conducting the tribal tests and informing the researchers of the scientific sources and references for football, and before starting the implementation of the educational curriculum, an introductory educational unit was given to the students. The educational curriculum was implemented at the beginning of the second semester according to the numbered heads strategy on Wednesday 17/3/2021 and the units were completed on Wednesday 31/3/2021. As it took three educational units to implement it according to the curriculum prepared by the subject's teachers and according to the current conditions of COVID-19.

The experimental group was divided into three groups with (5) students for each group and a color was assigned to each group, and the time of the educational unit consisted of (90) minutes, and this unit was divided for the control and experimental groups into three sections (the preparatory section, the main and the final section), the two research groups were similar in the (preparatory and final) section, and the difference between them was in the (main) section only, where the time of the preparatory section reached (20) minutes of the total time of the educational unit and included standing in one arrangement, taking absences, then warming up and physical

exercises. As for the main section, its time was (60) minutes, which included an explanation of the numbered heads strategy for students and the implementation of the educational unit according to the steps of this strategy, as follows:

- Dividing learners into groups of different educational levels.
- Each group is given a specific number, for example (1, 2, 3) and so on.
- The number of learners in one group does not exceed (5) individuals.
- Each learner is given a number to be recorded with him and memorized instead of his name, with the group number saved by the student.
- The teacher directs his questions in general and then determines the number of the learner who is intended to answer the question.
- The teacher sets the group number and then allocates the learner concerned with the question, and so on.
- At the end, the group that scored the most points in the lesson is determined, and grades are given on the basis of groups.

As for the final section, its time was (10) minutes and included calming exercises and providing advice and instructions. As for the control group, it uses the educational units prepared by the subject teacher.

(c) Post-test :

After completing the educational units, the post-tests were conducted on Wednesday, 7/4/2021, under the same conditions in which the pre-examinations were conducted, and with the presence of the same auxiliary team.

Statistical means :

Mean, Std. deviation, Mode, Skew ness, T value.

PRESENTATION, ANALYSIS AND DISCUSSION OF RESULTS:

Presentation and analysis of the results of the pre and post tests for the control group in the tests under study:

Table (4) It shows the significance of the differences between the pre and post-tests of the control group in the tests under study:

Variables	Pre-test		Post-test		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Learning motivation	126.04	7.88	136.3	10.18	3.95	2.14	Sig
Football Shooting skill	6.53	1.18	10.66	0.81	11.11		Sig

* Tabular value (t) at the level of significance (0.05) and degree of freedom (14) is (2.14)

Table (4) shows the arithmetic means, standard deviations, and the calculated (t) value between the pre and post test in the tests under study for the control group, the results showed that all the differences for the tests are significant and in favor of the post-test because the calculated (t) value is greater than the tabular (t) value of (2.14) and with a degree of freedom (14) and below the level of significance (0.05), and this indicates a significant difference in favor of the post-test in all variables are under investigation.

Presentation and analysis of the results of the pre and post-tests of the experimental group in the tests under study.

Table (5) It shows the significance of the differences between the pre and post-tests of the experimental group in the tests under study:

Variables	Pre-test		Post-test		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Learning motivation	127.33	7.62	139.5	9.01	2.55	2.14	Sig
Football Shooting skill	6.06	1.33	13.93	1.03	18.05		Sig

* Tabular value (t) at the level of significance (0.05) and degree of freedom (14) is (2.14).

Table (5) shows the arithmetic means, standard deviations, and the calculated (t) value between the pre and post test in the tests under study for the experimental group. The results showed that all the differences for the tests are significant and in favor of the post-test because the calculated (t) value is greater than the tabular (t) value of (2.14) and with a degree of freedom (14) and below the level of significance (0.05), and this indicates the existence of a significant difference in favor of the post-test in all variables are under investigation

Discussing the results of the pre and post tests for the experimental and control groups in the research variables:

It has been shown through the presentation and analysis of the results in tables (4,5) that there are significant differences with statistical significance between the pre and post tests for the two research groups (control and experimental) in the tests under study and in favor of the post tests.

The control group: The researchers attribute that the results obtained in their post-tests are due to the application of the method used by the teacher through his lesson or the mechanism that he follows during the explanation, which is displayed during the educational lesson. As the results that were obtained for the control group using the method followed by the subject teacher as a result of the students listening to the teacher and their keenness to obtain sufficient knowledge about the skill. In addition to the repetition of the exercises followed by the subject teacher, which led to obtaining the results of the post-tests in a convincing manner for the control group.

The experimental group: The researchers attribute that the difference and improvement in the results of the post-tests are due to the use of the numbered heads strategy, which suits all types of learners and helps to attract their attention to the activities and activities during the lesson. It also develops a sense of individual responsibility for them and works to spread the spirit of cooperation and interdependence among the group members. and this is confirmed by (Ali and others, 2018, p. 23) that this strategy is for time management and is based on heterogeneous cooperative groups, which generates interaction between its members and makes everyone active so that each individual plays his role in order to avoid embarrassment, and that the plurality of opinions leads to a higher level of knowledge of the student .(Fadel, Ali Qahtan, and others, 2018 p. 45)

And because of the use of this strategy and the steps it has for its implementation, it led to an increase in students' motivation towards learning and a decrease in the level of anxiety and fear of failure among students, and the provision of a high degree of reassurance, psychological comfort and self-reliance, in addition to what this strategy provides for strengthening members of groups, group-based learning from one another. As "learning within small groups of students allows them to work together effectively and help each other to advance the level of each one of them, and achieve the common goal". (Johnson and David, 1998, p. 23)

Presentation and analysis of the results of the post-tests for the experimental and control groups in the tests under study:

Table (6) It shows the significance of the differences between the post-tests of the experimental and control groups in the tests under study:

Variables	Experimental		Control		T value		Sig type
	Mean	Std. deviation	Mean	Std. deviation	Calculated	Tabular	
Learning motivation	139.5	9.01	136.3	10.18	4.86	2.02	Sig
Football Shooting skill	13.93	1.03	10.66	0.81	8.80		Sig

*Table value (t) at the level of significance (0.05) and degree of freedom (28) is (2.02).

Table (6) shows the arithmetic means, standard deviations, and the calculated (t) value between the post-test in the tests under study for the experimental and control groups. The results showed that all the differences for the tests are significant and in favor of the experimental group because the calculated (t) value is greater than the tabular (t) value of (2.02) and with a degree of freedom (28) and below the level of significance (0.05), and this indicates the existence of a significant difference in favor of the experimental group in all variables are under investigation.

DISCUSSING THE RESULTS OF THE POST-TESTS FOR THE TWO EXPERIMENTAL GROUPS:

Through what was presented in Table (6), it becomes clear that there are significant differences in the post tests of the variables investigated and in favor of the experimental group. The researchers attribute that the superiority of the experimental group over the control group is due to the use of educational units according to the numbered heads strategy prepared by the researchers.

Which eliminates the dependency that learners depend on in traditional teaching methods and makes the learner more ready, in addition to the diversity and change in the exercises used during the educational units. This is indicated by (Awwad, Zainab Abdel-Sada, 2011, p. 76) that the numbered heads strategy is one of the modern teaching strategies that actively contribute to encouraging active learning among learners, achieve good educational results, enhance and develop higher-order thinking processes, and work on developing positive attitudes among members of one group and other groups. Increasing students' feelings of kinesthetic satisfaction in the learning process.

And that this strategy effectively contributed to encouraging active learning among learners and achieving good educational results, as it was based mainly on dividing the learners into groups equal in the number of their members, and these groups bear sequential numbers. The members of these groups bear similar numbers, meaning that they are repeated on all groups, and it was called by this name because the members of the group put their heads together in order to verify the correctness of the answer to the question posed by the teacher and the holders of the relevant number provide the answer to the group as a whole . (Saadeh, Jawdat and others, 2000, p. 75)

This strategy is based on numbering the learners with numbers unknown to the teacher, a procedure that makes each student vulnerable to participate in the course of the lesson and answer the questions that are asked when a number is chosen because it includes more than one student because each number is repeated over the number of totals in the class. (Abu Harb, Yahya and others, 2004, pg. 56)

CONCLUSIONS AND RECOMMENDATIONS:

Conclusions:

- 1- The strategy followed and the method prepared by the subject teacher had a positive effect on learning motivation tests and teaching students the skill of football shooting.
- 2- The results showed that the students of the experimental group (the numbered heads strategy) outperformed the students of the control group (the method prepared by the subject teacher) in tests of learning motivation and teaching the skill of football shooting to students.

Recommendations:

- 1- Emphasis on the use of the numbered heads strategy in learning football skills because of its good results.
- 2- The necessity for the physical education teacher to know more than one teaching method, and to be familiar with modern teaching strategies.
- 3- Urging teachers to use modern methods and strategies and to stay away from indoctrination methods and impose ideas on students, but rather help them to access information on their own.
- 4- Conducting similar studies in other activities and games using the numbered heads strategy, for different age and school stages, for both sexes.

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