

THE EFFECTIVENESS OF AN EDUCATIONAL PROGRAM ACCORDING TO THE MENTAL MAPPING METHOD IN SOME KINETIC ABILITIES AND OFFENSIVE BEHAVIOR IN FOOTBALL FOR YOUNG PLAYERS

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Abstract

The purpose of this paper is to The effectiveness of an educational program according to the mental mapping method in some kinetic abilities and offensive behavior in football for young players. The experimental method was used. The research sample represented fourth-year players in the College of Physical Education and Sports Sciences at the University of Babylon for the academic year 2023-2024. The research sample consisted of (40) players, and they were divided into two experimental and control groups, with (20) players for each group. One of the most important results reached by the researcher is that: The educational program, according to the mind mapping strategy, contributed significantly to the development of the kinetic abilities under research , the exercises that were applied in the educational program prepared according to the mental mapping strategy also helped in implementing attack plans and formations , and the development of kinetic capabilities reflected positively on the development of the offensive plans of the research sample. One of the most important recommendations recommended by the researchers is that: Emphasis on the use of the mind mapping strategy in educational program when teaching applied academic subjects because of its role in developing effective education, creating a favorable atmosphere for the souls of learners and creating their motivation for the learning process, and conduct similar studies on other individual and group activities, and on different age groups.

Keywords: Educational program, mental mapping strategy, kinetic abilities, offensive, football.

Introduction:

The process of organizing the program in the form of mind maps leads to helping the learner increase comprehension and understanding of the materials. Therefore, arranging the correct meaning of the concepts in the student's mind is the basis for the educational process and a sure guarantee of its success and here comes the role of the student who has become a teacher. Understand the educational process to link information and concepts to each other. In the form of organized and arranged maps, which help him in his understanding of the subject and the possibility of recalling it and employing it in the educational situations he needs within the educational situations. Accordingly, we need educational strategies and teaching methods that would enable the student to store, retain and preserve knowledge. Usually used in new situations, and given the importance of mind maps in learning acquisition from the aspect of application and achievement. This study included the effect of the mental mapping strategy in implementing some offensive football plans and formations for players. To be a scientific method used by teachers and trainers to achieve the best results.

Research problem:

The researchers identified the problem of their research: By informing the field researchers and informing them of a lot of research and studies on the game of football and working in the field of teaching and training for this game, they noticed that there is a lack of use of programs and strategies that contribute to the development of planning and correct distribution processes while playing on the field. Since most learners miss a number of attacks and opportunities to score during their educational units, the researchers decided to prepare an educational program according to the use of a mental mapping strategy to distribute the players to their positions and the role of each one of them, which is the responsibility that falls on him, and the plan that is studied is for all players to be At the level of responsibility to achieve success for the entire team, in addition to developing some kinetic capabilities that are greatly involved in performance when implementing these plans.

Research objective:

- Identify the effectiveness of an educational program according to the mental mapping method in some kinetic abilities and offensive behavior in football for young players

Research hypotheses:

- The researchers hypothesized that there is an the effectiveness of an educational program according to the mental mapping method in some kinetic abilities and offensive behavior in football for young players

Research fields:

- Human field: Fourth year players in the College of Physical Education and Sports Sciences at the University of Babylon for the academic year 2020-2021
- Time field: (4/11/2020) to (2/2/2022).
- Spatial field: Stadium of the College of Physical Education and Sports Sciences, University of Kufa

Research methodology and field procedures:**Research Methodology:**

The experimental method was used because it is compatible with the nature of the research problem, and was designed using the method of two equal groups with pre- and post-tests.

Community and sample research:

The research sample represented Najaf Sports Club juniors for the 2023-2024 season. The research sample consisted of (40) players, and they were divided into two experimental and control groups, with (20) players for each group.

Field research procedures:**Determine tests for variables:****Kinetic ability tests:**

First: Testing the trunk bending backwards from prone (Hassanein , 1987):

Second: Zigzag running test, 4 x 9 m, to measure agility (Hassanein , 1995):

Third: Test of moving over the marks (Hassanein , 2003):

Determine attack plans and formations:

The researchers adopted the offensive plans that are taught within the semester courses for players of the fourth stage, College of Physical Education and Sports Sciences, University of Babylon, for the academic year 2020-2021, which are compatible with the abilities and capabilities of the players. After that, the researchers designed a form to evaluate the players' performance of the formations and offensive plans, to implement those formations and plans in question. By studying and researching by photographing their performance and sending it to a group of evaluators, experts and football specialists, to evaluate the performance of each student regarding formations and offensive plans, noting that the formations that were studied in the research are: formation (4-3-3), formation (4-4-2).

Exploratory experience:

The researchers conducted the exploratory experiment on a sample of players in the College of Physical Education and Sports Sciences at the University of Babylon, numbering (12) players, on (10/11/2021). The aim of it was to ensure the suitability of the plans and formations for the sample, as well as the efficiency of the assistant work team and knowledge of the difficulties. Which may confront the researcher for the purpose of avoiding it in the future and extracting the scientific foundations represented by (honesty and reliability) for forms to evaluate the performance of offensive formations.

Preparing the educational program using the mind mapping strategy:

The researchers reviewed the teaching program for the fourth stage and applied the educational program according to the mental mapping strategy on the vocabulary of this program after reviewing the relevant sources and references. They also conducted personal interviews with many experts in the field of teaching methods and kinetic learning to benefit from their experiences in how to apply This modern strategy is focused on making drawings in the form of maps that represent the basic and subsidiary concepts of all formations and offensive plans from the theoretical and

applied sides. Teaching was done according to this strategy, giving appropriate exercises and special assignments, the method of giving feedback, and how to apply this strategy during the main experiment in a manner consistent with the players' abilities. The number of educational units per week was (one educational unit and according to the requirements of the approved course in the college) and the total number of educational units was 8 educational units..

- Preparing mental maps that represent main and sub-details about the cognitive aspects of football, including several basic aspects that the student needs in an important way on the field, including (the law of the game, basic skills, offensive and defensive plans and formations).
- Preparing mental maps (showing the movements of all players in all playing centers and locations) that represent illustrations of plans and attack formations showing the movements of each player in any playing center.
- Preparing mental maps that represent illustrations for each playing center (each center has its own map).
- Asking each student to create special cognitive maps according to his ability and cognitive ability (considering those maps that each student prepares after the end of each educational unit as an evaluation tool).
- Using the presentation method (data show) to explain the movement of players and each position according to its duties.
- Displaying a live model, the teacher performs attacking plans and formations and how to stand and move in the positions assigned to each player on the field in front of the players to identify the correct model.

Pre-test:

The researchers began implementing pre-tests on members of the two groups (control and experimental) on Sunday, September 1, 2023, obtaining data and recording it on special forms in preparation for statistical processing.

Homogeneity and equivalence of the two research groups:

For the purpose of ensuring the homogeneity of the members of the research sample and the equality of the two groups among them regarding all variables, the researcher relied on the pre-measurement data and extracted indicators as shown in Table (1).

Table (1) shows the homogeneity and equivalence of the two research groups in the growth variables and the variables investigated.

No.	Variables	Measuring unit	Control group			Experimental group			T Calculated	Level sig
			Mean	Skewness	Std. Deviations	Mean	Skewness	Std. Deviations		
1	Height	Cm	174,5	0,20	4,62	174,4	0,13	4,64	0,184	Non sig
2	Weight	Kg	65,11	0,11	7,75	66,02	0,19	7,23	0,249	Non sig
3	Age	Month	267,4	0,27	5,97	265,9	0,21	5,85	0,334	Non sig

4	Agility	Second	11.86	0.854	0.73	11.82	0.84	0.62	0.855	Non sig
5	Kinetic flexibility	Cm	57.68	0.654	2.65	57.62	0.951	3.20	0.952	Non sig
6	Kinetic balance	Degree	5.31	0.584	0.94	5.37	0.369	0.95	0.854	Non sig
7	Offensive plan (4-5-1)	Degree	4,47	0,58	0,44	4,48	0,69	0,31	0,522	Non sig
8	Offensive plan (5-3-2)	Degree	3,82	0,47	0,40	3,84	0,61	0,55	1,17	Non sig

The tabular value of (T) is at a significance level of (0.05) and a degree of freedom (38) equals (2.04).

Post-test:

After completing the implementation of the educational curriculum according to mental mapping strategies and including (8) educational units on the members of the experimental group, the researchers conducted the post-measurement on the members of the control and experimental groups under the same conditions and specifications of the pre-measurement on Thursday 9/14/2023 and obtained the data and recorded it in special forms. As a prelude to treat it statistically.

Statistical methods: The search data was processed through the Statistical Package for the Social Sciences (SPSS) (Shalan, Aboode, & Radhi, 2022).

Results and discussion:

Presenting and discussing the results of the pre- and post-tests for the control and experimental groups for the variables under research.

Presenting the results of the pre- and post-tests for the control group for the variables investigated.

Table (2) shows the arithmetic means, standard deviations, T-value calculated for the correlated samples, the test significance level, and the significance of the difference for the pre- and post-tests for the control group for the investigated variables.

Variables	Measuring unit	Pre-test		Post-test		T value calculated	Level Sig	Type Sig
		Mean	standard deviation	Mean	standard deviation			
Agility	Second	11.86	0.73	11.06	0.58	3.85	0.003	sig
Kinetic flexibility	Cm	57.68	2.65	60.50	2.16	4.92	0.000	sig
Kinetic balance	Degree	5.31	0.94	6.62	0.80	4.39	0.002	sig
Offensive plan (4-5-1)	Degree	4,47	0,44	2,38	0,67	4,61	0,001	sig
Offensive plan	Degree	3,82	0,40	3,68	0,38	4,16	0,002	sig

(5-3-2)								
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Presentation the results of the pre- and post-tests for the experimental group for the investigated variables:

Table (3) shows the arithmetic means, standard deviations, T-value calculated for the correlated samples, the test significance level, and the significance of the difference for the pre- and post-tests of the experimental group for the investigated variables.

Variables	Measuring unit	Pre-test		Post-test		T value calculated	Level Sig	Type Sig
		Mean	standard deviation	Mean	standard deviation			
Agility	Second	11.82	0.62	10.67	0.45	5.91	0.000	sig
Kinetic flexibility	Cm	57.62	3.20	62.37	1.20	5.38	0.001	sig
Kinetic balance	Degree	5.37	0.95	7.68	0.87	6.38	0.000	sig
Offensive plan (4-5-1)	Degree	4,48	0,31	9,71	0,47	6,11	0.000	sig
Offensive plan (5-3-2)	Degree	3,84	0,55	16,82	0,54	6,22	0.000	sig

Presentation of the results of the tests (post-post) for the control and experimental groups for the variables investigated.

Table (4) shows the value of (t) calculated for the independent samples, the test significance level, and the significance of the differences between the test results (post-test) for the control and experimental groups for the variables investigated.

Variables	Measuring unit	Pre-test		Post-test		T value calculated	Level Sig	Type Sig
		Mean	standard deviation	Mean	standard deviation			
Agility	Second	11.06	0.58	10.67	0.45	4.325	0.001	sig
Kinetic flexibility	Cm	60.50	2.16	62.37	1.20	4.984	0.001	sig
Kinetic balance	Degree	6.62	0.80	7.68	0.87	3.654	0.001	sig
Offensive plan (4-5-1)	Degree	2.38	0.67	9,71	0,47	3.694	0.001	sig
Offensive plan (5-3-2)	Degree	3.68	0.38	16,82	0,54	5.984	0.000	sig

The results presented in Tables (2), (3), and (4) for the arithmetic means, standard deviations, and (t) values calculated for kinetic ability tests (agility, kinetic flexibility, balance) showed that there were significant differences between the pre- and post-tests for the control and experimental groups and in favor of The post-tests, and between the post-tests, are in favor of the experimental group. The researchers attribute the reason for these differences in the control group to the educational program prepared by the subject teacher, as it used exercises in multiple ways and methods, as well as the use of general and specific physical exercises at the beginning of the preparatory section, and the jogging and movements included in these exercises. Speed and jumping, as these exercises together contribute to developing physical and kinetic abilities as well.

As for the significant differences among the members of the experimental group in kinetic abilities, the researchers attribute the reason for this to the application of the educational program according to the mental mapping strategy prepared by the researchers, as this program contained situations that focused on the sample members performing complex and varied movements aimed at changing the positions of the body, whether On the ground or in the air. The researchers also used auxiliary tools in performing educational situations, which are (markers, rings, stairs, rugs). These tools, if used during physical and skill performance, will contribute to the development of physical and kinetic abilities believes that “auxiliary devices and tools work to improve and accelerate the learning process when learning and training learners in mathematical skills because of their positive effects in contributing to the learning and training processes with the least time and effort because they contribute to the integration of the educational and training unit to implement the prescribed program with the aim of raising the learner’s technical level.” Tactical, physical and cognitive” (Al-Rubaie , 2011) (Saleh, Radhi, & Abdullah, 2021).

The effectiveness of the mind mapping strategy that the researchers applied in the educational units was aimed at improving and raising the level of kinetic and skill abilities and self-realization of the learners and making them satisfied with their overall performance confirms “When educational situations are implemented effectively, the overall performance of learners improves greatly and thus enables them to gain an additional benefit, which is the development of new learning about how to learn skills.” (Al-Haila , 1999) . and mentions, “Exercise is of great importance in general and specific physical preparation and skill preparation, whether for beginners or senior levels” (Mahjoub, 2001).

The researchers used a combination of physical, skill and tactical exercises in the educational program. It had a major role in generating additional strength for the working muscles and accelerating the movement of body parts, which led to an increase in the physical and kinetic aspects, and this is what pointed out: “The kinetic performance of the skill depends on Special physical and kinetic abilities.”(Khaleq , 1999) (Hashem, Dahash, & Radhi, 2021).

The development of kinetic abilities is linked to the development of physical abilities, as agility is linked to speed, and flexibility is linked to strength and speed, and that “the learner must acquire an appropriate amount of strength and speed

sufficiently before developing flexibility in order for flexibility exercises to have a good effect.” (Al-Saffar , and et al , 1987).

The experimental group’s thoughtfulness in the plans is due to the nature of the mind mapping strategy, as it has a completely new and distinct method that is presented to the players through posters detailing the performance. All of this led to attracting the players’ focus and attention and increased their passion and motivation towards learning, as their senses were stimulated and thus Their concentration increased, and this is consistent with pointed out (Abu Hatab , Fouad Abdel-Latif and et al . 1988).

This is also due to the fact that this strategy is concerned with helping... Players learning how to participate in designing the maps that were required of them led to an increase in their self-confidence and an improvement in their performance, which reduced the negative attitude towards the academic subject while performing the practical lessons that they thought were difficult, and this was confirmed by the results of the post-application. This is consistent with what was indicated by “(Fattah Anan , and Bahi , 2001)

The researchers also attribute these differences to the fact that when the players watched the visual models, the correct performance was firmly established in their minds, which made the student compare it with his performance, which led to an improvement in his level. Also, with the models, whether visual or printed, the student can compare his current performance with the presented model, so he knows his mistakes and points. Its weakness and the required responses, as the general picture of the correct response has become known to them, so they must try to modify their responses to determine the desired goal.

The researchers also attribute this development to the offensive plans in football for regularity and continuity in the educational units, where the players practiced a new strategy that was not common in regular lessons , “The opinions of experts, regardless of the differences in the sources of their scientific and practical culture, are The educational program inevitably leads to the development of achievement, if it is built on a scientific basis in organizing and programming the training process, using appropriate and graduated intensity, observing individual differences, as well as using optimal repetitions and effective inter-rest periods, under the supervision of specialized trainers under good training conditions in terms of place, time, and tools used” (Hamada , 2004)

Conclusions and Recommendations:

Conclusions:

- The educational program based on the mind mapping strategy contributed significantly to the development of the motor abilities under investigation.
- The exercises that were applied in the educational program prepared according to the mental mapping strategy also helped in implementing attack plans and formations.
- The development of motor capabilities reflected positively on the development of the offensive plans of the research sample.

Recommendations:

- Emphasis on the use of the mind mapping strategy in educational program when teaching applied academic subjects because of its role in developing effective education, creating a favorable atmosphere for the souls of learners and creating their motivation for the learning process.
- Conduct similar studies on other individual and group activities, and on different age groups.

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Shows the evaluation form for applying mind maps to attack plans for fourth-stage players.

Student sequence	Student Center	Correct positioning before receiving the ball (1 degree)	method to receive the ball (1 degree)	Correctly receiving the ball (1 degree)	To make an offensive move on the defender (2 degree)	Close distance between him and the defender (2 degrees)	Accuracy of handling to a teammate or accuracy of scoring (2 degree)	Observance of the provisions of the law (1 degree)	total
1									
2									
3									
4									
5									
6									
7									
8									
9									
10									

Appendix (2)

An example of an educational unit

Educational program vocabulary				
The first week		A model of an educational unit using mind maps		
Educational unit:		First - Unit time: 90 minutes		
Number of Players :		20 divided into two teams of 10 players each		
Educational goal:		Distributing offensive duties and giving a work map for the offensive plan (4-3-3)		
Tools		Football field - 5 footballs - paints - whistle - stopwatch		
Sections of the training unit	Section time	exercises used	Formations	Notes
Introduction: Attendance registration	20 minute	Preparing the tools, recording attendance, and explaining the goal of the educational training unit -Regular jogging - jogging by moving the arms and legs -Stretching exercises -Warm-up exercises with balls		The form and format of the exercise varies depending on the type of exercise

<p>Main section</p>	<p>70 minute</p>	<p>Includes the main part The first exercise: We divide the attacking positions into the playing positions, which are (defense, midfield, and attack). We explain how to move on the field, displaying a model for each position, and specifying the movements at the required times so that the players' attention is not distracted by the large number of duties, while trying to link it to the explanation used on the datasheet. The second exercise: The right wing's movements are similar to the left wing's movements, which are moving to approach the goal without the ball, and when receiving the ball, advancing and attacking defenders, and also cutting off tackles near the goal without the ball when the defenders advance. The third exercise: The movements of the right forearm are similar to the movements of the left forearm, which are receiving the ball from the winger, pressing the second and third defenders, passing the ball, intersecting with the winger with or without the ball, and penetrating and scoring after deceiving the goal. Just an explanation: It is an offensive plan in football, three players are used in the attacking line. Two wingers and a striker "spearhead" are often used in the middle. This plan is not usually used at the beginning of the match, but it can be switched to if they are losing and want to return to the match. Explanation only: As for the center or distributor, his movements and duties are many, the most important of which are rotating the ball, crossing, and coordinating the work with the anchor. The teacher distributes the</p>	<p>Shapes number (1,2,3) Movements of midfield and attack players</p> <p>Shapes number (5,6) Movements of attacking players</p>	
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		assignments to the middle of the field, monitors the players' movements, and guides them to create their own mental maps for each center in order to benefit from them and remember them when applying the same plan in the coming weeks.		
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