



## THE EFFECT OF PROBLEM-SOLVING STRATEGY ON DEVELOPING SOME MOTOR ABILITIES AND PLAN BEHAVIOR IN FUTSAL FOR YOUNG PLAYERS

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### Abstract

The research problem has crystallized in problems accompanying the process of developing motor capabilities, which reflects negatively on their skill performance, especially in plans to act, and thus not scoring goals and winning matches, so researchers decided to go into this experience by using the problem solving strategy that includes preparing development exercises for the purpose of solving problems Which stands an obstacle to the development of some kinetic capabilities and plans to act for players emerging in the futsal. The research aimed to identify the impact of the problem -solving strategy in developing some kinetic capabilities and plans to act for players emerging in the futsal.

The researchers used the experimental curriculum by designing the two pre and post -Testing groups to implement the vocabulary of the problem -solving strategy, and the research community was identified to implement the problem -solving strategy with the emerging players of the (Al Mahawil- Club), which numbered (16) players, and the sample was divided equally into two experimental and controlled groups, and after conducting tribal tests The experimental group members began applying the units prepared by researchers and lasted for eight weeks every week, three development units, after completing the vocabulary of the units. The researchers conducted the dimensional tests, then they collected the data and was statistically processed



with the SPSS program. As for the most important conclusions, they are that the exercises prepared by researchers according to the problem -solving strategy helped significantly in developing the motor capabilities of the emerging players with the futsal , as well for the most important recommendations, they are, the necessity of using the problem solving strategy in developing the obese and motor capabilities of the emerging players with the feet, as well as conducting studies on other activities and ages.

**Keywords:** problem-solving strategy; motor abilities; plan behavior; futsal.

### **1 - Introduction and Importance of Research:**

Scientific development included the emergence of ideas and strategies that tend to make the learner take the greatest role in the learning process while the teacher plays his role in guidance and guidance and giving the learner the opportunity and time to use various strategies to solve the problem that faces him and this is what the problem -solving strategy depends on that provokes the learner's feeling of the problem It faces, identifying it and finding appropriate solutions to it according to his own thinking and opinions, and for this he is the attention of specialists in teaching various skills in various sports such as the Futsal game to use unconventional strategies in the educational unit And the football ball is one of the difference sports that took a distinguished position in terms of its practice and spread in the countries of the world, and the game is characterized by its inclusion in many basic, offensive and defensive skills that are one of the strong pillars on which the game is built and that the learner's arrival to success depends on the mastery of his skill performance, Planning behavior is one of the most important foundations for the success of the Futsal game .The importance of research lies in preparing a strategy to solve problems and learn about the impact of this strategy in developing some kinetic capabilities and plans to act for players emerging in the . Futsal So, through the field researchers' experience, they defined the problem of their research that the Futsal football game is one of the games that are characterized by the multiplicity of skills as basic demands for the optimal performance level that students should learn, develop and master, so the problem of research is accompanying the process of developing motor capabilities, which reflects negatively on their skill performance Especially in plans behavior and thus not scoring goals and achieving victory in matches, so researchers decided to go



into this experiment by using a problem solving strategy that includes preparing development exercises for the purpose of solving problems that stand in the way of developing some kinetic capabilities and plans to act for players emerging in the Futsal .The research aimed to identify the impact of the problem -solving strategy in developing some kinetic capabilities and plans to act for players emerging in the Futsal .The researchers also assumed that there is an impact of the strategy to solve problems in developing some motor capabilities and plans to act for players As for the fields of research, they were represented by the emerging players of Al -Mahawil Club, and the time of conducting the experiment was on 4/1/2020 to 23/4/2020, but regarding the place of exercise and field experiences, the researchers chose the sports hall of the Al -Mahawil Sports Club.

## **2- Research Methodology:**

The curriculum is one of the important factors that the researcher follows to solve his problem and is chosen according to the nature of the problem to be studied, as the nature of the problem is imperative for researchers to use the experimental curriculum because it is compatible with the nature of the research problem, and by designing the method of the two equal (experimental and control) groups with the two pre -testing and post -tests.

### **2 -1 Society and Sample of Research:**

The research community was identified with the emerging players of Al -Mahawil Club, who numbered (16) players, and they were divided into two control and experimental groups equally, as the experimental group used the problem solving strategy, while the control group was used the usual method by the team coach

### **2-3 The devices, tools and means used in the research:**

#### **2-3-1 Data collection means:**

- 1- Arab and foreign sources and references.
- 2- Personal interviews.
- 3- Tests and measurements.
- 4- Special forms to register the results of the tests for the players.



### **2-3-2 tools and devices used:-**

1. Legal Hall futsal Stadium.
2. Confidants (10).
3. Rings with a diameter (50 cm) number (10).
4. An electronic device for measuring length and weight.
5. Fort the number (10) type (Molten).
6. Polish -made (Dell) laptop (1).
7. Fox (2) whistle.
8. The condition of a measuring the Sunter.
9. Pall ejaculation.
10. Speeds with a height of (20 cm) number (10).
11. Wood targets measuring (1 x 1 m) number (6).
12. Sports timing clock (3).

### **2-4 Field Research procedures:**

#### **2-4-1 Selecting research variables:**

First: The kinetic capabilities: which include the following:-

1. Fitness.
2. Flexibility.
3. Compatibility.

Third: Planning behavior with the feet football.

#### **2-4-2 Tests and measurements used in the research:**

##### **2-4-2-1 Known Capacity Tests:**

First: a test of running among the faces (20 AD): (Risan Khouribet: 1989)

Test Name: Running between the Stocks (20 AD).

The goal of the test: measuring agility.

- Tools used: measuring tape (10), timing hour and whistle.

Performance: When hearing the whistle, the player ran between the faces, boycotting (20) m.

- Registration: The best time is calculated from two attempts since hearing the whistle until crossing the end line (20) m.

**Second: The trunk bending test is a successor from the flattening: (Louay Ghanem: 1987)**

The purpose of the test: measuring the background of the spine.



Tools: measurement tape, square, assistant.

Performance description: from the putting position. The arms behind the back with the bottom tip are installed by a colleague, the laboratory, the trunk, slowly bend the stem to the maximum extent he can and stabilize for two seconds. The distance is measured from the bottom of the chin to the ground by a tape measure so that the tape is in a vertical position on the ground and in front of the laboratory head during the measurement, provided that the zero is in contact with the ground.

- Registration: For each laboratory two attempts to record the best attempt from them.

### **Third: Test of the numbered circles: (Muhammad Subhi: 1995)**

The purpose of the test: measuring the motor compatibility between the eye and the legs.

- Tools: an hour of stopping, drawing on the ground (8) circles, provided that the diameter of each of them is (60) cm and the circles are numbered from (1 to 8) as in Figure (3).

- The performance description: The laboratory student stands inside the circle (1) and upon hearing the starting signal, he shall fabricate according to the circle (2) and then (3) .... until the end of the circle (8), and the jump is with the two men together.

- Registration: The time that the laboratory student has taken to move on the eight districts is recorded in the second.

### **2-4-2-2 Description of the Planning Acting Test: (Mustafa Salman Kazem: 2018)**

- The purpose of the test: Measurement of plans with the feet football.

Stadium and tools: Legal halls ball, whistle, football balls (2).

Test method and conditions:

After the player (A) receives the ball from the goalkeeper, he passes it to the player (B), who stands Qatar in the right side of the player (A), and after the player (B) receives the ball, he will return it to the player (A). A) By turning and passing the ball to the player (C), who stands Qatar in the left side of the player (A), then the player (C) returns the ball to the player (A), then the player (A) returns the ball to the player (B) and when the ball reaches the player He passes it directly to the player (A) and starts forward in a straight manner and when



the ball arrives at the player (A), he passes it to the player (D) and when the ball arrives to the player (D) he prepares it to the player (B) coming from the back to pay it on the goal and as shown in the shape (10).

### **Method of Registration**

Video photography of the artistic performance is shown on two assessments to evaluate the offensive technical performance used in the diamond style in its implementation during the match and through it the expert is granted for each correct organized attack that ends with a goal of (3) degrees, and the correct organizational attack that did not end with the goal of (2) degrees, and the attack The organization, which is built on the basis of the diamond style, which is rebuilt, is given because it has not been completed.

### **2-5 The Exploratory Experience of the Tests used in the research:**

The exploratory experience was conducted on Tuesday 7/1/2020 at ten in the morning in the Al-Mahawil Sports Club hall on a sample of (4) players from the research community and the aim of this following experience was:-

1. Ensure that the stadium and used tools are valid and suitable for tests.
2. Determine the maximum time for each exercise used in training units (strict).
3. Knowing the research sample response to the tests.
4. Practical training for researchers and the assistant work team, to determine the negatives and positives that accompany the application of tests in terms of supplies and method of work.
5. Knowing the field difficulties that researchers may face during the application of exercises in training units.
6. Knowing the time required to apply the vocabulary of prepared exercises.
7. Extracting the scientific foundations for used tests.

### **2-6 Main Experience Procedures:**

#### **2-6-1 PRE Tests:**

The researchers conducted tribal tests on the research community of the two groups (the control and experimental) for study variables in the days (Friday, Saturday), which approved (10 and 11/1/2020), and the tests were according to the following sequence:-





The first day: physical aptitude tests.

The second day: Planning behavior test.

### **2-6-2 Preparing and applying the problem solving strategy: Researchers applied the experiment according to the following steps:-**

- The research groups were taught as follows:-

The experimental group: It was taught according to the weekly plans and with the strategy of solving problem, by (three development units per week), and in the whole main section.

- The control group: It was taught according to the weekly plans according to the method followed by the team coach, by (three development units per week).

• The researchers prepared a problem solving strategy to develop motor capabilities and plans behavior, and began implementing the strategy in the main section of the development unit, by providing explanation and presentation to the educational situation to help the players learn about the correct form of the skill situation, and then the problem solving strategy is applied through the distribution of images and drawings An explanation for the solution solutions for the skills, and after choosing the best solutions agreed upon by all players, it is implemented by them and under the supervision of the team coach and researchers.

- As for the control group, the method followed by the team coach was applied. The researchers prepared development exercises and positions of (18) exercises, at a rate of (5-7) exercises for each development unit.

- Procedural steps to implement a problem solving strategy:-

First: dividing the players:

The experimental group was divided into two groups, each group consisting of (4) players, and the selection of a leader for each group among its players, his duty to consult with his colleagues when the problem is raised to choose the best solution among the solutions presented to the chosen skill situation, and then answer them.

Second: Understanding the problem or position:

At this stage, the coach must make sure that the situation or problem raised is clear and understandable from the player, and at the level of his challenge, it contributes to explaining the situation or the problem, formulating it and knowing its main elements while asking questions to students, including:-

-What is required to be found in the problem?



- What is the information given to students about the problem or the data it includes?
- What are the conditions and conditions that constitute the situation or the problem?
- Drawing plans for the situation or problem.
- Analysis of the elements of the situation and its conditions and separation between each of them.
- Is it possible to achieve these conditions by choosing the best solution?

Third: Setting a solution plan:

It relates to choosing the solution and its strategy, and the coach must help during the presentation and ask the questions that lead them to reach the idea of the solution, such as:

- v Do you have an idea of the position?
- v Have you been exposed to this situation while practicing the game with your colleagues with such a picture? Did you see it by following some international matches?
- Try to think carefully about the situation and is the situation familiar to you or I had previously passed it?
- Have you used the information given to you all in the situation?
- Did you take into account the conditions and conditions related to the entire skill situation?
- Have you taken into account all the basic ideas and elements that include the situation to reach the best solution?

Example: The teacher asks the special questions for the problem of the forearms of the forearms when receiving the transmission from the bottom to help students implement the solution through the total answers about the problem raised.

Fourth: Implementing the solution: To help the players implement the solution plan, the coach directs the players to review each of the steps of the solution, and this is done during the teacher asking several questions to his students, such as:-

- Can you clearly see that every step of the solution is correct?
- Have you used in the solution all data?
- Have you discussed with your colleagues the steps of the solution before choosing it?





Then the researchers, in cooperation with the team coach, solve the offered problem.

**Fifth: Review the solution and verify its validity:**

This is done by asking several questions to his students, such as:-

- Can you review the solution you reached and make sure of its steps?
- Can you find an alternative solution to this solution so that it leads to the same result (score a direct point)?

**Sixth: Apply the solution:**

After reaching the optimal solution that all players agreed upon in the two groups, they are divided into groups according to the requirements of the skill situation, the implementation begins under the supervision of the coach with the correction of the mistakes committed according to the game law for the purpose of exceeding them in the following repetitions, so that all players are implemented properly.

**2-6-3 POST-Tests:**

The researchers, with the help of the assistant work staff, conducted the post-tests of the research community after the completion of the application of the problem solving strategy, and in the days (Friday and Saturday), which approved (27 and 28/3/2020) and with the same sequence of tribal tests, as the researchers took into account the same conditions in which tribal tests were conducted In terms of testing sequences.

**2-7 Statistical means used in the Research:-**

The researchers used the statistical bag (SPSS) to analyze the search results, including:-

**3- Viewing, analyzing and Discussing the Results:**

3-1 Presentation of the results of the pre and post- tests of the control and experimental groups of the variables under research:

**Table (1) calculations and standard deviation in the Results of the Pre and Post - tests of the group control of the seized variables**

Statistical monuments Optimized variables	unit of measurement	pre-test		post-tests		T Value Calculated	sig	Indication type
		M	S	M	S			
Fitness	Sec	11.938	0.831	11.161	0.545	2.605	0.035	moral
Flexibility	Cm	56.375	2.722	59.625	2.386	3.688	0.008	moral
Compatibility	degree	5.875	0.834	6.5	0.755	2.376	0.049	moral
Planning behavior	degree	1.375	0.517	1.625	0.744	0.683	0.516	Un moral

**Table (2) The calculations and standard deviations in the results of the pre and post -tests of the experimental and control group of the variables show**

Statistical monuments Optimized variables	unit of measurement	experimental group		control group		T Value Calculated	sig	Indication type
		M	S	M	S			
Fitness	Sec	11.785	0.791	0.791	10.463	4.216	0.004	moral
Flexibility	Cm	56.125	3.313	3.313	62.25	4.135	0.004	moral
Compatibility	degree	5.75	1.035	1.035	7.625	2.934	0.022	moral
Planning behavior	degree	1.250	0.462	0.462	2.250	3.055	0.018	moral

**Table (3) The mathematical circles and the standard deviation in the results of the post- tests of the two controlled and experimental groups of the seized variables**

Statistical monuments Optimized variables	unit of measurement	control group		experimental group		T Value Calculated	sig	Indication type
		M	S	M	S			
Fitness	Sec	11.161	0.545	10.463	0.461	2.762	0.015	moral
Flexibility	Cm	59.625	2.386	62.25	1.488	2.64	0.019	moral
Compatibility	degree	6.5	0.755	7.625	1.06	2.443	0.028	moral



### 3-2 Discussion Results:

Through what was presented in Table (1 and 2) we note the existence of moral differences in tribal and dimensional tests in favor of members of the two controlled and experimental groups and for the benefit of dimensional tests. Researchers attribute the reason for the moral difference of members of the control group to variables and influences that have interfered in the development process that led to the emergence of moral differences between the two tests. The tribal and the dimension, including the feedback, as it had an effective role, as the feedback is given in the method followed by the trainer directly to the learners during the performance, and it can be given at the end of the educational unit, and this was confirmed by (Ali Al -Dairi and Ahmed Batani) "after the end of the application and preparation period To the end of the unit, the teacher corrects the errors of the learners." This was confirmed by the (Schmidt:2000) that the feedback increases the energy and motivation of individuals, enhances the right performance and avoids wrong performance. Researchers also attribute the reasons for these differences to other variables that interfered in the process of improving learning, including following the principle of gradual learning of motor skills as well Learning. While the moral differences showed by the above tables of the experimental group members attribute the researchers to the use of a problem solving strategy in terms of planning and implementing educational units, as the exercises developed by researchers using the problem solving strategy have transferred learners from the regular style that makes them recipient of information that the teacher puts to A new pattern based on the question and the choice of appropriate solutions, and this motivated the learners to respond to this strategy, trying to succeed and demonstrate their capabilities and emphasize their self and prove their capabilities that are often seen by shortcomings and indifference, which facilitated the process of developing motor capabilities and understanding the skills and absorbing them with its three sections (preparatory, president, The closing), in addition to the reasons for these differences that the new educational positions that the learners were exposed to, which are clearly characterized by the goal and what the learners are required to achieve, and were not recognized in the regular educational units, which led to a clear improvement in their performance and this is what (Fouad has indicated Suleiman Qalaa) "Who is the clarity and determination of the goals in the light of behaviors or level A certain performance is that it is meaningful and effective,



just as the interaction between the single group and their active discussions on the educational task they undertake an impact on their understanding of the educational subject .And that the experimental group excels over the control group in the kinetic capabilities and skills plans to behave also due to the use of a problem solving strategy, which allows the learner to take the time to learn according to his capabilities and self -capabilities and in the way of displaying the educational material and this is consistent with what he mentioned (Dhafer Hashem: 2002) "that from The natural phenomena of the learning process is that there must be development in learning as long as the teacher follows the steps of the proper foundations of learning and education and for the beginning of learning to be sound, it must be clarified explanation, presentation and exercise on the correct performance and focus on it until the consolidation and stability of performance, and that providing the learner with feedback increases From the learner's motivation and urges the correct performance with the desire and impulsivity .The presentation of the educational material, whether it is written, fixed and mobile, or videos that enable it to use more than one sense in the learning process, and this contributed and impressive in the diversity of sources of knowledge and increasing the opportunities for good learning, and this improvement in technical performance and accuracy of technical skills in behavior The plans came as a result of moving away from the ordinary in the accusation by using the problem solving strategy) that has the role in making the learner the focus of the educational process and his performance is organized according to the steps of the strategy in addition to using various positions, and the continuous guidance of observers supervising the performance of these exercises, which helped in Reducing the errors that the learner may make exercise during the educational unit.The researchers also attribute this to the time of the use of the problem -solving strategy that they prepared, which had a great impact in making the motor learning process more effective and positive through the strategies that provided the opportunity for the learner to be an active element in the educational process, and this is what (Mohamed Mahmoud, 1999) referred to Implementing the curricula according to the effective time, the general performance of the student improves a lot and then provides a better performance level. Likewise, follow the steps for applying exercises after explaining and presenting them using educational means, training in skill, and providing learners with feedback constantly increasing the motivation of learners and reaching the accuracy of the skill



performance, as well as his independence in making decisions from his performance. It works to achieve communication and transfer educational goals from the teacher to the learner and it increases the effectiveness of the learning process and improving it, and motivates learners to more participation in educational situations and his suspense to participate in more learning and continuity, as it facilitates the process of remembering by calling the information ", and this helps to Gaining a kind of installation for motor programs in the minds of learners as a result of the time that the program took, which led to the first beginnings of acquiring a kind of experience, and this is another and important factor in developing the level of learners, so it is mentioned (LIBA) and (mohr) that "training for a specified period leads to an improvement The accuracy and the experience are directly proportional to the accuracy. "The researchers also attribute the reason for the trial group's superiority over the control group in the kinetic capabilities that the curriculum prepared according to the solution to problems and competition contributed to achieving educational goals through the implementation of the learners for the motor duties to perform skills within the planning behavior, as (Mustafa Abdel Qawi,: 1987) confirms that " The teacher's knowledge of different learning methods is extremely important to know how learning occurs and any methods are more effective in organizing educational materials and delivering them to the student .Also, this strategy has strengthened the mutual relationship between the teacher and the learner and gave the learner an effective role in accomplishing the educational process, in contrast to the method followed and giving him a role of freedom to reach the discovery of skill performance himself and apply what you discovered practically through thinking, then visualize the correct performance, which thus leads to awareness Then creativity in performance, and this is supported by what I mentioned (El -important, 1997). On the positive and negative ones, it is useful in the development of the level and excellence, "which strengthened the status of learners from a cognitive point of view and made them able to think, put solutions and replace them in the event that they are not applied in the field, and this is all made the information focus in the service of generating ideas and choosing their best in a manner consistent with the state of stimuli that can be possible To appear as new variables and deal with them on the basis of the position of play, and on this basis, learners must be familiar with the fields of scientific knowledge to enable him to deal with all. circumstances it faces in matches and dealing with



them in the best way and to create the best solutions to the problems that hinder the process of winning or training, as well as studying everything that is negative and revealing its causes and standing on it and developing everything that is positive and supporting and benefiting from it, and this scientific knowledge helps him to analyze everything that is characterized by the game and develops it Then he enables him to be able to think properly and behave good.

#### **4- Conclusions and Recommendations:**

##### **4-1 CONCLUSIONS:**

- 1- The exercises prepared by researchers according to the problem-solving strategy helped in developing the Fitness and Flexibility of the emerging players in the Futsal balls
- 2- Likewise, the time period in which the exercises were applied according to the problem solving strategy greatly helped in developing the plans to act for the emerging players in the Futsal.
- 3- The experimental group, which used the problem-solving strategy in the Compatibility that are discussed over the group controls in the post- tests.

##### **4-2 Recommendations:**

- 1- The necessity of using the problem solving strategy in developing the obese and motor capabilities of the emerging players with the futsal.
- 2- Emphasizing the use of the strategy of solving problems in teaching applied academic subjects because of its role in developing effective learning and teaching, and to attain the beloved atmosphere to the hearts of learners and create their motivations for the learning process.
- 3- Conducting similar studies on other individual and group activities, and on different age groups

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