



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2023; 8(1): 145-148

© 2023 Yoga

www.theyogicjournal.com

Received: 01-11-2022

Accepted: 05-12-2022

Dr. Hayder Jaber Mousa

Assistant Professor, General
Directorate of Education in
Najaf, Ministry of Education,
Iraq

The effect of mastery and guided discovery styles according to a recovery program to development of some physiological and skill variables for futsal players

Dr. Hayder Jaber Mousa

DOI: <https://doi.org/10.22271/yogic.2023.v8.i1c.1390>

Abstract

The research aimed to reveal each of my methods (mastery and guided discovery) according to a recovery program in developing some physiological and skill variables for futsal players, and the research hypotheses were that there were significant differences in some physiological variables and the level of skillful performance between the two research groups and for the benefit of the players who are trained to according to the methods of mastery and guided discovery according to a recovery program, The researcher used the experimental approach due to its suitability to the research problem, and the research sample was represented by the youth players of Naft Al-Wasat Sports Club, which numbered (30) players, and they were divided into two experimental groups, the researcher concluded that the styles of mastery and guided discovery had a positive effect on the development of the basic skills under discussion, and that the style of mastery was better than the method of guided discovery in learning basic skills (by dribbling), as well as the method of guided discovery was better than the style of mastery by (passing), convergence in Both methods (scoring), and the most important recommendations were to emphasize the use of the comparative method and guided discovery in the development of some physiological and skill variables for young players in futsal.

Keywords: Fartlek exercises, holmer's method, defensive performance endurance

1. Introduction

The great achievements that have been achieved in various events did not come by chance, but through proper scientific planning and the employment of specialists in the sports field of all sciences to serve the achievement in sports events and games. They always seek to develop the game by raising the levels of players from the technical, tactical and psychological aspects. therefore, the researcher decided to experiment with two types of methods (mastery and guided discovery), so that the importance of research using these two methods lies in teaching and developing some physiological and skill variables. Guided is one of the most common and used methods in the field of teaching the skills of sports activities, and it is the method widely used in teaching these skills.

1.1 Research problem

Recovery is one of the things that must be taken into account when planning, and it is one of the important foundations in the events of the required response or adaptation, and there are many methods and means, but the studies concerned with it did not reach importance, especially in the game of futsal, and through the experience of the researcher in futsal training, he noticed the need to use the recovery curriculum to suit the specificity of their training and to rely on the available capabilities of his devices and means, provided that they are planned according to the studied scientific foundations and complemented by relaxation exercises that help reduce the time for the body to return to its natural state for the purpose of initiating training.

Corresponding Author:

Dr. Hayder Jaber Mousa

Assistant Professor, General
Directorate of Education in
Najaf, Ministry of Education,
Iraq

Subsequent as best as possible with knowledge of physiological variables, so the research problem emerges in the need to study the effect of each of the methods of mastery and directed discovery to know the impact of using each of them as an educational measure in detecting the level of performance of the players, in order to employ the results of this research in the service of the educational and training process futsal.

1.2 Research objectives

To identify the impact of the two methods of mastery and discovery directed according to a recovery I program in the development of some physiological and skill variables for futsal players.

1.3 Research hypothesis

There are statistically significant differences between the results of the pre and post tests of the two experimental research groups in some physiological and skill variables for futsal players.

1.4 Research fields:

Human field: Youth players for Naft Al-Wasat Sports Club for the halls for the sports season (2022).

Time field: 15/8/2022 to 30/10/2022.

Spatial field: Indoor Hall Stadium / Naft Al-Wasat Club.

2. Research methodology and field procedures

2.1 Research Methodology

The researcher used the experimental method due to its suitability to the nature of the research.

2.2 Community and sample research

The research community was tested from the youth players of the Naft Al-Wasat Sports Club for halls, which numbered (30) players, whose ages ranged from (16-18) years.

2.3 Devices and tools used

- Arabic and foreign sources and references
- The interview - physiological variables - skill tests - balls number (10)
- Stopwatch (1) - Camera (1)
- (1) Huawei mobile phone for photography.
- 2 Korean-made (LG) portable electric massage devices
- 2 American-made OX meter to measure the pulse rate.).

2.4 Homogeneity of the sample

2.4.1 Shows the homogeneity of the research sample.

Table 1: Shows the homogeneity of the research sample

N	Variables	Unit	Mean	Std. deviation	Median	Skew ness	Sig type
1	Length	Cm	1686.56	4.12	168	0.57	Non sig
2	Mass	Kg	69	3.56	72	0.47	Non sig
3	Age	Month	21	2.32	21	0.74	Non sig

2.4.2 Research Procedures

2.4.3 Physiological tests

2.4.3.1 The first test: the lactic acid concentration test in the blood: (Amir, Kazem Jaber, 1997, p.65)

2.4.3.2 Test objective

Measuring the concentration of lactic acid in the blood before and after exercise.

Hardware and tools:

1. Portable (electronic) lactic acid meter.
2. Sterile methanol solution.
3. Medical cotton.
4. Registration forms

See Appendix (5) and Figure (5) showing a picture of the (electronic) lactic acid meter

2.4.3.3 Procedures and conditions

The device is filtered with its included tape, the tester is inserted into the needle of the device, a blood sample is taken with the device's kit, the kit is placed in the device to obtain a reading, the ear nipple is swabbed and sterilized with medical cotton and sterile solution, and each laboratory has (Kit) is for its own use only once.

2.4.3.4 Register

Readings are taken directly from the device and recorded in the form for each player.

2.4.3.5 Metabolic Rate (RMR) Test: (Mahmoud Ahmed Abu Al-Enein, 2000,p.34) [6].

2.4.3.6 Test objective

Measurement of metabolic rate (RMR).

Hardware and tools:

1. The Fitmate pro system.
2. Sanitary paper to clean respirators.
3. An antiseptic solution for sterilizing respirators

2.4.3.7 Procedures and performance specifications

The person conducting the test cleans the breathing mask of the (RMR) measurement with the disinfectant solution and connects the parts of the (Fitmate pro) device system together, after entering the tester's information into the device, which includes the name, date of birth, gender, height, weight, and choosing the type of test to be performed, which is (RMR), And then fixing the breathing mask tightly with its rubber belt and making sure that the breathing air does not leak from the sides of the mask placed on the face, and the experimenter sits on the chair without performing any effort for a period of (15) minutes.

2.4.3.8 The conditions

1. The experimenter must be in a normal state of rest before the test begins.
2. The duration of the test is (15) minutes.

2.4.3.9 Register

The device provides a comprehensive reading of the RMR measurements.

Unit of measure: (calories/day)

2.5 basic skills tests under study:

2.5.1 The first test: the ball dribbling test for a distance of 30m. (Ismail, Thamer Mohsen and two others, 1991, p.87) [7].

- **The aim of the test:** measuring the ball dribbling.
- **Tools used:** soccer ball, stop watch, indicators number (2), metric measurement tool, whistle.

- **Description of the performance:** From the high starting position, the player stands behind the starting line with the ball on the starting line. With the start signal, the player dribbling the ball at maximum speed for a distance of (30 m) to the finish line, circles around the finish line marker and returns with the ball, repeating the test (5) times continuously.
- **Test instructions:** A distance of (30 m) is determined parallel to the side line, and the starting line and the finish line are determined by two figures, as in Figure (3). The player only makes one attempt.
- **Register:** calculates the time taken back and forth, back and forth, and back, and records the time to the nearest (1/100) of a second.

2.5.2 The second test: the ball scoring test: (Mousa, Hayder Jaber, 2019, p483-488) [8].

1. **The aim of the test:** to measure the accuracy of shooting 0
2. **Performance method:** 7 balls are distributed in the penalty area, and the student starts running from behind the sign on the penalty arc towards the first ball.
3. **Registration Method:** The score is calculated by the total scores obtained by the student from scoring the seven balls as follows:
 - (3) degrees if the ball enters the two specified areas (1, 3)
 - 1 point if the ball enters zone (2) 0
 - Zero if the ball goes outside the goal 0

2.6 Pre-Tests

The pre-tests for the sample were conducted by applying the tests and at the Naft Al-Wasat Club for halls, at exactly nine

o'clock in the morning the researcher as much as possible confirmed the conditions related to the test in order to provide the same conditions in the post-tests.

2.7 Educational Curriculum

The researcher prepared two recovery and training curricula, which lasted (8) weeks, and the curriculum was implemented on the two experimental groups, and the educational unit took 90 minutes. As the physiological tests and skill exercises were implemented at a rate of two educational units per week according to the prepared curriculum and as shown:

1. The number of training units per week (2) training units.
2. The total number of training units (16 training units).
3. The time of one training unit is (90) minutes.
4. The training curriculum for teaching dribbling and shooting skills took two weeks for each skill, with 4 educational units.

2.8 Post-tests

The post-measurement was applied after carrying out the physiological and skill exercises prepared by the researcher under the same conditions in which the pre-tests were applied.

2.9 Statistical Methods

The researcher used the statistical bag (SPSS) in analyzing the data.

3. Presentation, analysis and discussion of the results

3.1 The results of the pre and post tests of the research variables of the experimental group using the method of proficiency

Table 2: Shows results of the pre and post tests of the research variables of the experimental group using the method of proficiency

Variables	Pre-tests		Post-tests		(t) value calculated	Sig level	Sig type
	Mean	Std. deviation	Mean	Std. deviation			
Lactic acid before effort	3	1.5	1.95	0.67	3.22	0.02	Sig
Lactic acid after effort	10.22	1.65	6.43	0.94	7.66	0.01	Sig
Metabolic rate	2532	43 95.	3054	97.12	2755	0.03	Sig
Dribbling	9.23	2.93	12.91	2.64	8.48	0.01	Sig
Shooting	8.53	3.91	11.11	3.43	8.31	0.02	Sig

3.2 The results of the pre and post tests of the research variables of the experimental group using the guided

discovery method

Table 3: Shows results of the pre and post tests of the research variables of the experimental group using the guided discovery method

Variables	Pre-tests		Post-tests		(t) value calculated	Sig level	Sig type
	Mean	Std. deviation	Mean	Std. deviation			
Lactic acid before effort	3.2	0.83	3.5	0.70	2.21	0.02	Sig
Lactic acid after effort	12.87	1.54	13.65	1.33	11.65	0.01	Sig
Metabolic rate	2684	127.32	2977	153.72	2741	0.03	Sig
Dribbling	8.18	1.56	11.72	1.33	7.22	0.01	Sig
Shooting	7.50	2.76	10.53	3.31	6.98	0.02	Sig

4. Discussing the results

The results presented in Table (2, 3) showed that there are significant differences between the pre and post tests and the two research groups, and to explain the reasons for the effect of my methods (mastery, guided discovery) on the training units prepared by the researcher in developing some physiological and skill variables for futsal football players. The first experimental group that used The mastery method achieved a development in the post-tests compared to the pre-tests, the researcher attributes this development to the impact of the mastery method that used the recovery and training

approaches in terms of the time of the training unit and the comprehensiveness of the curriculum with a balance in the method of organizing the exercises from easy to difficult and observing the performance of the sample, which increased the motivation of the players and is commensurate with the situations required by the physiological and skill variables during their practice. to reach the stage of true mastery, the researcher also attributes the reason for that difference to the training units that the members of the Itqan style group underwent, which took into account the individual differences between the members of the same group, as mentioned

(Yarub Khion, 2002, p.)^[9] During this, he proved his ability to greatly develop the skill level of the players, It is very important for individual differences and how to take them into account, so we find that they develop the level of skill performance in a high way". The researcher attributes the emergence of these results to the recovery approach, which was in the two variables of measuring lactic acid Assad at rest time (before the effort) and measuring lactic acid Assad (after the effort) to the types of training massages, as the massage exercises worked to increase the effectiveness of the muscles and an improvement in the work of blood circulation in the players Futsal football facilitated the delivery of blood to muscle cells, which helped in the effectiveness of cellular exchange and the improvement of the work of vital organizations, and this was confirmed by Fadel Al-Shuwaili, "that the concentration of lactic acid in the blood at rest is approximately (1) mol kg / liter in the blood, and this could be a result of the low muscle metabolism rate during rest, which occurs from the slow velocity of blood flow at rest." (Al-Shuwaili, Fadel Kamel, 1997, p.45)^[10].

As for the second experimental group, which used the guided discovery method, it achieved a development in the post-tests compared to the pre-tests. The researcher attributes this development to the regularity of the players in the recovery curriculum and the training units that lasted for eight weeks, including the players practicing the discovery method, as well as the suitability of the discovery method for the ages of the players and their physiological and skill capabilities. Which increases the fun and excitement of the learner, the discovery method also makes the players work by expressing themselves and their capabilities to reach one goal, and the researcher attributes the reason for increasing the amount of learning to performance according to the discovery method more in relation to the mastery method with the skill of targeting. The discovery method was appropriate for the second experimental group and what they possess of capabilities It helps them interact with the implementation of this method, as it gives an essential role to the players by making them a participant in the training process and not just a performer, in addition to that it increases motivation towards learning by affecting suspense and excitement while discovering information by itself. And the process of reinforcement and error correction through feedback helped to stabilize the learning of skills, as it: "helps guide the learner about movement or achievement before, during, or after performance, and is one of the important axes in the learning process" (Schmidt, A., 1992,p.85)^[11]. The researcher attributes the reason for the development of the two groups with the scoring skill to the sufficiency of the application of the training units and their containment of exercises that are characterized by a scientific image and correct and consistent repetitions consistent with the level and ability of the sample members, and increased its effectiveness as a physiological adaptation in reducing the burden on energy systems. This was confirmed by Ira Wolinsky, "The exchange of energy contents and its metabolic waste, including lactic acid, turned into pyruvic acid and entered within the chain of energy liberation and increased the rate of metabolism". (Ira Wolinsky and Judy A. Driskell, 2008, p.67)^[12].

5. Conclusions and Recommendations

5.1 Conclusions

5.1.1 Through the results of the study, the conclusions were

1. The mastery method was better than the distributor's

method in learning basic skills (by dribbling).

2. The distributor method was better than the comparator method (shooting).
3. The results showed that learning according to the distributed method with the presence of rest periods has a major role in increasing the development of physiological and skill variables for futsal players.

5.2 Recommendations

5.2.1 Based on the previous conclusions, the researcher recommends

1. Emphasis on the use of the methods of mastery and guided discovery according to curative curricula in developing some physiological and skill variables for futsal players.
2. Developing training curricula commensurate with the level of players in terms of physiological and skill abilities.
3. Benefiting from the introduction of the two methods of mastery and guided discovery within the training curriculum for coaches in developing some physiological and skill variables for futsal football players.

6. References

1. Zuhair Qasim Al-Khashab, *et al.* football, 2nd edition, Mosul, Dar al-Kutub for printing and publishing; c1999.
2. Ali Khalifa, Ahmed. Basketball for beginners. B. i. Umm Al Qura University.
3. Wadih Yassin, Hassan Muhammad. Statistical applications and computer uses in physical education research, University of Mosul: College of Physical Education; c1999, p. 103, p. 154, p. 178.
4. Sinai Fleih Hassan. The Effect of Guided Discovery Style on Perception and Learning Some Basic Skills, Master Thesis, Diyala University, College of Physical Education; c2010.
5. Amir, Kazem Jaber. Physiological tests and measurements in the sports field, 1st edition, Kuwait, Manshaat Al-Maarif; c1997.
6. Mahmoud Ahmed Abu Al-Enein. Determination of Standard Levels for Some Elements of Physical Fitness in Football, Master Thesis, College of Physical Education, University of Baghdad; c2000.
7. Ismail, Thamer Mohsen, *et al.* Testing and analysis in football, Dar Al-Kutub for Printing and Publishing, University of Mosul; c1991.
8. Mousa, Hayder Jaber. The Influence of the Use of a (Multi-Skills) Device according to the Various Exercises in the Development of the most Important Physical Abilities and Basic Skills of Futsal for Female Students, Indian journal of public health research Development. 2019;10(8):483-488.
9. Yarub Khayoun. Kinetic Learning between Principle and Application, Sakhr Printing Office, Baghdad; c2002.
10. Al-Shuwaili, Fadel Kamel. The effect of sports training on the concentrations of the main components of sweat and their analogues in plasma and their relationship to the energy production system in the body: PhD thesis, University of Baghdad, College of Physical Education; c1997.
11. Schmidt A. Motor Control and Learning, A Behavioral emphasis: (Champaign Hlinois,); c1992,
12. Ira Wolinsky, Judy A Driskell. Sports nutrition, energy metabolism and exercise:- Library of Congress Cataloging-in-Publication Data; c2008.