



Effect of Using Metacognitive Thinking Mechanism in Learning Some Artistic Gymnastics Skills for Students of the College of Physical Education and Sports Sciences Basic Skills on the Floor Exercises

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Abstract: *The study of metacognitive thinking variable, in learning some skills in artistic gymnastics, was implemented using the experimental method. Sample members were the first stage students of the College of Physical Education and Sports Sciences in the University of Diyala, in gymnastics for boys. They were (60) students divided into two groups: controlling and experimental with (30) students in each.*

The study aimed at knowing the use of the independent variable (metacognitive thinking) in learning some skills in artistic gymnastics for boys'. Through the results and statistical data, achieved by the researchers, there found significant differences with statistical reference in favor of the experimental group.

Researchers recommend using the strategy of metacognition thinking in learning some skills in other devices and activities.

Keywords: *Metacognition, Skills, Artistic Gymnastics.*

1. INTRODUCTION

Metacognition concept is considered as one of the concepts that have deep stems for the first eras , because it is related with feeling , emotions and internal changes of the individual. However , this can be seen through mind and sentiment, which include anticipation , emotions behaviors of the individual in the process of performing, this is in concordance with “ mind talk to himself when thinking”

Hussien (2015) also define it as “ The ability of the individual in thinking of the thing that he learns and his control over this learning, but before becoming able to judge on such learning.” Among what we are witnessing today are the rapid changes and challenges in the era of the making thinking, the era of knowledge fissures, and the large number of concepts that have developed this world at all levels and fields through interest in science, knowledge, learning and



creativity. That was not a coincidence , but it came because of the responsible and researchers who work with great efforts to provide what is required from the students of knowledge.

The term metacognitive appeared with great importance in the fields of education in general and the fields of physical education and sports sciences in particular , specifically in the field of motor learning, due to the interdependence of the metacognitive variable and its overlap with mental processes centered in the brain.

From mind , that is the responsible center of such processes, the process of transmitting instructions sets out to other parts of the body and it has its own reflection in the learning process.

Thus, clear harmony ,in the level of learning, can be found . This makes it possible, in turn, to provide students with learning skills such as (planning, thinking, meditating, remembering and retrieval), and this is confirmed by “the close connection between human movement and the activities that occur through the brain, which are the products of interdependence and organization, and planning in transferring and delivering ”[3].

Significance of the study lies in students learning of some skills related to artistic gymnastics for boys. In addition to the possibility of improving students’ level by following the steps in an orderly and sequential manner. This can be done by adopting correct methods in metacognition, and how to learn skills and move from the easiest part to the most difficult one, in one skill and from one skill to another; provided that it is close to it in the level of performance.

2. METHODS PARTICIPANTS

Selecting the community and sample of study is one of the important matters that must be taken into account because the sample is “the part that represents the community of origin or the model on whom the researcher conducts focus all of his work” [4]

Selection of the study community was done deliberately, who are the first stage students in the College of Physical Education and Sports Sciences, for the subject of artistic gymnastics for boys. And detailed as follows:

- A. Their number was (150) male and female students, (girls) were excluded from the main sample.
- B. Thus, the number of the final application sample was (60) students, and the study sample was divided randomly,by a (lot) , into two equal groups . The first is the experimental group and the second is the controlling one, with (30) male students in each.to represent a percentage (40%) of the study community.

Protocol

Researchers use the experimental method because it is the most suitable method to the nature of the problem of the study. The design of two equivalent groups, controlling and experimental, is adopted. Besides, all the steps of the experimental method have been followed.

The process of pretests is considered as one of the important matters in scientific research. The pretests were conducted on the sample of the study on (20/6/2021) in the Artistic Gymnastics Hall.



Performance was evaluated out of (10) marks by “four judges according to the performance discounts for the game, the highest and the lowest marks are deleted, the remaining two marks are added and divided by two to extract the mark” International Law of Gymnastics.

Statistical Analysis:

The Main Experiment Pretests:

The process of measurement and testing is an integral part of the requirements of scientific research. The experiment of the research is defined as “ a process of measuring the quality to be measured within the limits of the research” [6]. The sample was tested on (20/6/2021) in the Artistic Gymnastics Hall of the College of Physical Education and Sports Sciences.

❖ The experiment was applied on Monday (6/21/2021) and ended on Wednesday (7/28/2021). The duration of the experiment lasted for (5 weeks) at the rate of (1) teaching session per week and the total of the sessions, throughout the experiment, were (5) sessions.

Steps followed in the strategy of Metacognition Researchers followed the steps of this strategy for the experimental group. Metacognition process takes place through the awareness acquired by the individual and his awareness of the processes that he practices during the skillful performance of any kinetic duty assigned to him, whether the duty was (psychological, physical, skillful, cognitive).

The process of transmitting and interpreting information is carried out through sensation, imagination, thinking and management. This is done by controlling and evaluating the information that the individual has acquired mentally by transferring and processing information and solving problems facing him during the learning process. Moreover, this can be done through several skills, where these skills are divided into three divisions and according to priority.

1- **Skill of planning:** - A pre-drawn picture or pre-planning is made to the task, that the individual is carrying out, which includes.

- a. Defining one goal or a group of goals.
- b. Feeling the existence of the problem and identifying its nature.
- c. Selecting the steps for carrying out the task.
- d. Arranging the motor duty in order of priority.
- e. Identifying errors and correcting them.

2- **Controlling or monitoring:** - The individual is monitored during the implementation of the task and the motor duty assigned to him through

- a. Paying attention to the motor duty and focusing on it.
- b. Motor duty must be carried out within sequential steps.
- c. The motor duty should be within a specified time.
- d. Predicting in detecting the error and the ability to correct it.
- e. The correct selection of steps during the correct context in the performance.

3- **Evaluation:** - An evaluation process of the individual's level of performance and achievement of the motor duty is carried out through

- a. Assessing the extent to which the goal can be achieved by the individual.
- b. Knowing the correct and accuracy of the information.



- c. Assessing the efficiency of the style of work
- d. Evaluating how to overcome errors and obstacles.
- e. Evaluating the effectiveness of the plan.

1- Posttests:

Post tests were conducted on 7/29/2021 .The same method followed in the pretests was followed when the assigned experiment period ended .It lasted for (5) weeks . The researchers were keen to provide the posttests with all the conditions provided to the pretests and their requirements in terms of time, place and means of test and performance of referees in order to assess the skill according to the activity of artistic gymnastics.

2-5 Statistical Means

Researcher used statistical methods according to the ready-made statistical package (SPSS).

3. RESULTS

Variable s	Means of Measuerment	Experimenta l group		Controlling group		Calculat ed (t)	Error Percenta ge	Referenc e
		Mea n	SD±	Mea n	SD±			
Arabic Jump	Mark	7.752	1.000	5.555	1.006	4.950	0.000	Significa nt
Backward Hand Jump	Mark	6.958	1.071	5.822	0.960	2.628	0.000	Significa nt

Metacognitive strategy is highly effective in learning artistic gymnastics skills, as well as activating the individual's ability to think and improve individuals' ability to handle issues and solve.

4. DISCUSSION

This section included a detailed presentation of all the results of the tests used in the study for the pre and post tests for the members of the study sample. Results , from testing of the sample, were discussed and they were in favor he experimental group. The prominent and effective role was to the strategy used by the researchers in the research and to following the steps in an organized manner. Metacognition strategy is considered as one of the advanced strategies that has a high and effective effect through the learner’s self-control, which is related to the person’s thinking and actions, and this process is the reflection of the motor duty assigned to him.

Thus, this needs to follow steps as the learner follows it by understanding the acquired information and correcting errors and dealing with them.

This agrees with “that learners need to skills and tools that provide them with maximum endurance while thinking and finding solutions” [9] Metacognition strategy is also concerned with increasing the level of correct learning through problem solving related to educational materials and motor duties that the learner performs, which increases the ability to face difficulties and find the right way out during the performance of the skillful performance and motor duty.



This depends on the confidence that the individual has in understanding and interpreting information and the process of transmitting and applying instructions . This is confirmed by “the process of thinking and performance is a mental activity that depends on the development of mental processes and increasing their activity and developing the individual’s awareness through linking knowledge and information

Moreover, one of the advantages of this strategy is that it works on: developing awareness an, activating the mind of the learner , increasing the ability to make decisions in order to reach the goal to be learned or known, and the possibility of finding the most beneficial and easiest solutions to follow in the learning process.

Therefore, most learners who rely on sound and thoughtful thinking are better than those whose style is random. This is confirmed by Furat Jabbar “The more organized, broad and thoughtful the learner is, the higher the rate of his learning will be at a high and advanced level”

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5. REFERENCES

1. Baer. R. A smith, G.t.Hopkins. S. J, and kritSSSemeyer, J (2006); Using Self-report Assessment Methods to Explore facts of Mindfulness. Pervin.
2. Brown, K and Ryan, R (2003). The Benefits of Being Present: Mindfulness and its Role in Psychological Well-Being. Journal personality and social psychology.
3. Fathi El-Zayat. (2015). The Psychology of Learning, 1st edition.
4. Hussain, D. (2015). Metacognition in Mindfulness: A Conceptual Analysis. Psychological Thought, 8(2), 132-141. doi:http://dx.doi.org/10.5964/psyct.v8i2.139 .
5. International Gymnastics Law. (2016).The Iraqi Federation, 2016, p. 96.
6. Muhannad Muhammad Abdul Sattar. (2011). Measurement and Evaluation, 1st Edition, p. 397.
7. Muslim Badr. (2008). Teaching Gymnastics Skills, p. 26.
8. Nabil Mahmoud Shaker. (2007.) Movement Milestones, p. 32.
9. Nabil Mahmoud Shaker. (2015). Movement Sciences, p. 36.
10. Shaima Abed Matar. (2010). Artistic Gymnastics, 1st floor, p. 185.
11. Theory and Practice, SPSS, 2015
12. Wajeeh Mahjoub. (2000). Scientific Research and its Methods, Dar Al-Kutub for printing, p. 297.