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# Effectiveness of Using Mental Speed Exercises in Learning the Skill of Front Hands Jump on the Platform in the Artistic Gymnastics

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*Abstract: The current study is conducted to learn the skill of front hand jump. Researchers use the experimental method on the students of the second stage of the College of the Basic Education, Department of Physical Education and Sports Sciences, in Artistic Gymnastics for boys. They were (20) divided into two groups: controlling and experimental, with (10) students in each. Experimental group members implement the mental speed exercises, whereas those of the controlling group used the style followed by the teacher.*

*The study aims at setting exercises characterized by mental speed in the activity of artistic gymnastics for boys in learning the skill of front hand jump on platform. After that posttest and pretest for the two groups were conducted. Having come up with the results of the two tests , statistical treatment has been made .Researchers concluded the positive effect of the mental speed exercises, set by the researchers and applied by the experimental group , on the process of learning the skill of front hand jump on platform. Such exercises were in favor of the percentage of learning.*

*Recommendations of the study includes using the mental speed exercises in learning some other skills on other devices of artistic gymnastics*

**Keywords:** Platform, mental speed exercises and artistic gymnastics.

## 1. INTRODUCTION

Gymnastics game is characterized by a high level of focus, accuracy and intelligence. It needs high intelligence to deal with devices to perform accurate performance and to deal with such devices effectively. [1]

To make the process of performance very high in its effect, a student or a learner is required to perform the kinetic duty accurately, with high speed and accurate attention. This can be done through exercises, partitions of such exercises and processes of mental, cognitive physical and skillful thinking. This depends on the individual effort, the special capabilities



of the learner, the nature of performance and exercise.

Mental speed exercises are characterized by fulfilling the kinetic duty in a highly effective way because they require thinking, cognition fast reaction, and highly accurate focus during performing the exercise or the kinetic duty, because the student deals with a motor field, devices and tools.

The process of performing the exercise requires such a method and level of exercises in order to instruct the learner in the form of sequential stages of performance from different positions and movements that may occur during the activity or the motor duty. A student should be provided with full briefing and vision of all that is in the educational session.

Moreover, such a briefing and vision should be given to the student while performing exercises, activity and movement that depend on anticipation, a speed of reaction, thinking and attention on the jumping platform [2].

As the learning process proceeds in sequential steps in learning the skill of hand jump on platform, starting from the easy part to the difficult part. And in the form of multiple stages that work on the development of these abilities of the learner of anticipation, reaction and speed of attention [3].

**Significance** of study lies in the students' learning the skill of hand jump on the platform device. Another point is the development of the ability of the students to increase the level of learning in the educational session by increasing the speed of the learner's response in performing the kinetic duty. Besides, how to deal with such kinetic with the device on which the skill is performed.

**Aims** of the study are:

- Setting exercises characterized with mental response in learning the skill of hand jump on platform.
- There are significant differences between the two tests. Pretest and posttest, for the students of both controlling and experimental groups in learning the skill of hand jump.

## **2. METHODS**

### **Participants**

Community of study is deliberately selected who are the students of the second stage / boys in the Department of Physical Education – College of Basic Education in the academic material of Gymnastics.

The community is detailed as follows: the total number is (22) students. Two of them participated in the pilot study thus they are excluded from the main sample. Therefore, the final number of the application sample is (20) students.

Then they are divided, randomly (by a lot), into two equal groups. The first one is controlling while the second one is experimental, with (10) students in each. The sample represented the percentage of (99%) from the community of the study.

### **Protocol**

The researchers use the experimental method for its suitability to the nature of the problem of the study. Selection of the experimental method is “ an attempt to control all the variables and basic factors except one variable, the researchers tame or change such variable



aiming at specifying and measuring its scientific impact” [4]

A two equivalent groups, controlling and experimental, design has been selected. The design includes steps and stages divided between the two groups, controlling and experimental. The independent variable of the experimental group is mental speed exercises, whereas the independent variable of the controlling group is the traditionally followed style.

Tests used in Study

The process of evaluating the skills of the study is adopted. The evaluation is made of points by four referees according to the performance discounts in the law on activity. The highest and lowest points are deleted, the remaining two points are added and divided by two to extract the point.

Main Experiment

### **A- Pretests:**

Pretest is considered as one of the methods of evaluation and measurement. In fact, they were conducted on the sample of the for the skill of hand jump on platform device on 27/5/2021 in the Artistic Gymnastics Hall.

Application Mental Speed Exercises

The researchers set the mental speed exercises for the skill that are suitable for the students' physical and skillful abilities, and for the interest of the performance of the skills.

❖ The experiment was applied on Thursday (27/5/2021) and ended on (27/6/2021). The duration of the experiment was (4 weeks) with (1) educational session per week. The total educational sessions throughout the experiment amounted to (4) sessions.

Researchers adopted the following steps in the teaching session:

- When setting mental speed exercises, consideration should be given to the level of the sample.
- Using mental speed exercises that are appropriate to the nature of performance.
- Direct use of mental speed exercises.
- Gradual performance and with consideration the principle of ease in the first place.
- The experimental group performs the mental speed exercises that are set by the researchers.
- The controlling group applies the traditionally followed up method of the teachers. Pretests are done a day before the start of the experiment, whereas posttests are done a day after the end of the experiment.
- Teaching session is divided into three parts: preparatory, main and end parts. The exercises are applied in the main part of the teaching session.
- Duration of the teaching sessions is (90) minutes. They are distributed as follows: the preparatory part (15) minutes, the main part (70) where concordant exercises get (30) minutes from those (70), and the end part (5) minutes.

### **B- Posttests**

Posttests were conducted on 06/28/ 2021, and the same method was followed as in the pretests. After completing the scheduled period of the experiment, which lasted 4 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 judges in order to assess the skill.



### **Statistical Means**

Researchers use the statistical means according to SPSS. [5]

### **Statistical Analysis**

Six weeks after the experiment of the educational sessions, results of the current study, table (1), showed that there are highly significant differences. That was under a probability level of ( $P < 0.001$ ) between groups of study in the hand jump skill on the platform.

Mean and standard deviation of the experiment group are (5.90 and 0.94) respectively. While those of the controlling group are (7.93 and 0.70) respectively

### **3. RESULTS**

Mental speed exercises worked on activating motor response of learner. Through such exercises, motor and skillful performances, of hand jump on platform, become in a good level. This skill requires quick motor response and mental explanation. Exercises were well employed and they were very effective on the results of learning.

Table (1) Mean  $\pm$  and SD of the technical skills in the groups included in the study

| Skill                        | Control group(Mean $\pm$ SD) | Experimental group(Mean $\pm$ SD) |
|------------------------------|------------------------------|-----------------------------------|
| Front hands jump on platform | 5.90 $\pm$ 0.94              | 7.93 $\pm$ 0.70 *                 |

### **4. DISCUSSION**

Mental speed exercises contained in the main part of the educational unit are a mixture of physical, skillful and kinetic abilities (motor response speed. "The nature of mental speed exercises include exercises of response speed of reaction, kinetic expectation, distinction and an increase in the cognitive ability of the kinetic sense. This is so to maintain movement balance during performance "[6]

Exercises are mixed with physical activity (motor) and the skill to be developed. These exercises are given in a directed way towards certain goals, as well as repetition with correcting errors, that made students perform the exercises as "The player reaches to perform the skill automatically through constant repetition" [7]

"Which works to achieve balance in the learner and benefit from the main components of these exercises, as the mental speed exercises work to make students achieve a large amount of learning and to be aware of all the desired components during learning in the educational session, especially the skills of artistic gymnastics, specifically the skill of front hand jump on platform. Because it needs to a very high point of compatibility, balance and reaction speed. This makes it a good level in motor performance while performing".

For the purpose of reaching good results that make a good the level of mastery for the three skills, Researchers tented to improving the level of students' performance in learning the skill through mental speed exercises. Emphasis made on giving immediate feedback after each attempt. "Giving immediate feedback, in terms of knowing the results, will improve achievement through learning motor skills." [8]

This is consistent with what Christina [9] found; it is proved that in the stages of acquiring the initial skill, feedback must be given after each attempt in the sense of continuing to reinforce.

This is also consistent with what Dr. Qassim Lezzam Sabr states [10]

"Method is the style followed by the physical education teacher to clarify everything related to the skill. This is done in explanation and application to transfer it to the mind of the recipient (the



learner); in accordance with his physical abilities, his development and creativity that he achieves through the method he follows

As for the feedback required in the physical education and sport lesson, Dr. Qassim refers to it by saying, "It is the information that is given to the learner about the achievement in an attempt to teach the skill that shows the accuracy of movement during or after the response, or both. In that the feedback means knowing the results, evaluating them and Benefiting from them through the information received by the learner as a result of his motor behavior." [11]

Mental speed exercises, that are contained in the main part of the educational session, are a mixture of physical kinetic abilities (kinetic response speed) accompanying the performance of the skill of front hand jump on platform.

They are mixed with physical activity (kinetic) and the skill needed to be learned. Such exercises are directed towards certain goals, as well as repetition with correction of errors, which made the performing student perform well through the implementation of these exercises, as "the student reaches the performance of the skill automatically through constant repetition [12]

And this is consistent with what was referred to as It is "the teacher's duty to encourage students and players to perform as many attempts as possible" [13]

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