



ISSN: 2456-4419

Impact Factor: (RJIF): 5.18

Yoga 2022; 7(2): 132-135

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Received: 14-10-2022

Accepted: 26-10-2022

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## The effect of the pillars strategy on glide shot put technique performance for the intermediate school students

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### Abstract

This study aimed at identifying the role of an educational curriculum that was based on the educational pillars strategy on learning the skill performance of shot put the students of Intermediate School. The researcher presupposed the existence of a positive role for an educational curriculum that was based on educational pillars strategy in learning the skill performance among the students of Intermediate School in shot put. The researcher used experimental method through two groups (experimental and controlled) due the feature of the research. The population study was chosen from students of Intermediate second grade in Al-Qalaa Secondary School for Boys, they were 74 students. The sample of the study was chosen randomly from two classes (A, B), they were divided into two groups (controlled and experimental), each one contained 20 students. The statistical package was used for social sciences (spss) using the laws of (arithmetic mean, standard deviation, t-test for independent samples and related samples). The results of the study showed that the effectiveness of the educational method that was based on the educational pillars strategy helped the members of research's sample to learn the skill performance of shot put among the members of the sample. Therefore, the researcher recommends the need to use the educational pillars strategy in learning all other throwing activities in athletics.

**Keywords:** Educational pillars strategy, art of skill performance, shot put

### Introduction

There has been an expansion of knowledge with great progress in all areas and disciplines of life, including the field of education. This development was the reason for the interest in learning based on modern teaching methods that go beyond memorizing and recalling information to use it in new educational situations, helping the learner to think and solve problems, and in this way, he uses distinct mental processes. The balance of countries is not measured only by their wealth, but is measured by minds that create knowledge and maintain a balance between contemporary educational skills and national identity. This will only happen by preparing learners with special qualities who are able to adapt to future educational and technical changes.

Renewal and modernization in the strategies of teaching different concepts and skills in our time have become very important to produce a balance between rapid life and change in the era of globalization. Traditional learning has been exposed to many problems that have severely affected the level of education in general and prevented it from achieving its goals. Traditional teaching strategies have not been able to provide the learner with basic knowledge and skills to be able to keep pace with this era with all its challenges and changes. (Saleh MM, 2012) [2].

Therefore, advanced countries in the field of education look for different strategies from traditional teaching. The educational pillars strategy is one of the modern strategies that are used in this field. It is an educational strategy that has been prepared based on social theory, and it is also a continuous building process based on temporary cognitive support for students to help them in dealing with the educational situations that are prepared by the teacher. (Al-Kubaisi, Abdul W, H. & Taha, F, Y, 2015) [3] affirmed and quoted from that this strategy is one of the modern strategies used in teaching, which generally calls for

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providing a participatory, supportive and facilitating a learning environment for education. This strategy is considered an application of Vygotsky's theory, which states that learning occurs through participation with others, and that learners' interaction with more knowledgeable or capable learners affects the way they think and interpret different situations.

Educational pillars are the teaching strategies that are used to provide assistance represented by teaching directions, activities and programs for members of the current research sample so that they can continue their own learning.

In order to make the teaching and learning of shot put more effective, the knowledge will be transferred from the teacher to the learner, who will then interpret the learning events through the teaching strategy that was used. Throwing weight is one of the basic activities in the field that students learn as a systematic activity and it is one of the basic activities in throwing competitions. Scientific research on this event shows us the great global progress in recent years in the level of performance and achievement for this activity due to the high level of physical fitness and mobility, in addition to the scientific facts that the practitioner obtains in the process of training and education. We will talk about some studies, such as (Al-Araji, A, Y, 2006) [1] that used constructive, preparatory and compound exercises in learning technical performance and achieving the digital level in the shot put. The study of (Terzis, 2012) [16] that dealt with the impact of counter movements by jump and run on technical performance in shot put. The study of (Abd, H, T, 2013) [8], it was about the impact of using the Swom strategy on learning shot put for students of middle stage. The study of (Bosen, 1985) concentrated on the comparison between the traditional techniques and the spin technique in shot put. The study of (Al-Shama'a, H, F & Hamid, N, H, 2002) [7] concerned with the delay in the outcome of movement from performance in

learning the shot put. The study of (Muhammad, M, J & Ali, M, A, 2013) [10] included a comparison of the percentage of learning the technical performance of shot put among the female students of physical education. The study of (Terzis, 2007) [18] concentrated on the nature of the relationship between neuromuscular control and performance in shot put. The study of (Saleh, M, A, 2009) [9] handled the impact of different mental training methods on learning technical performance and the level of achievement in shot put. In addition, the study of (Ali, Q, M, 1999) [6] that examined the transmission of the impact of learning on the level of achievement in some throwing activities in athletics. Because of the important researches I mentioned above, I started searching for new teaching methods to create better learning for the largest number of learners and according to the available capabilities. This is exactly the importance of the study using the educational pillars strategy, where the researcher focuses on teaching the art of skillful performance among students in shot put.

**Method**

**Participants**

The population study was chosen from students of middle second grade in Al-Qalaa Secondary School for Boys, they were 74 students during the academic year 2019-2020. The research sample consisted of (40) students of Intermediate second grade, at a rate of (54%) of the total community. The research sample was divided into two groups, the experimental group that contained (20) students, which studied using the educational pillars strategy, and the control group that contained (15) students, which studied using the traditional method. In order to make sure that the learners started at the same time in the learning process, so the researcher conducted an equivalence for them in the variables of skill performance in the shot put, as shown in Table (1):

**Table 1:** It shows the equivalence in the variables of technical performance shot put among the members of sample

The test	Arithmetic mean	Standard deviation	Degree of freedom	Calculated t value	Difference of arithmetic means	Sig	Indication
Pre-test (experimental group)	37	3.24	22	0.072	0.083	0.943	Insignificant *
Pre-test (control group)	36.91	2.31					

N1 = 20, N2= 20 \* insignificant because the value of (sig) is smaller than (0.05).

**Procedures**

The pre-test was conducted on 12/2/2019 at Al-Qalaa Secondary School for Boys at 10:00 AM, where the technical performance tests were conducted for shot put, which was the subject of the study.

**Curriculum**

The content of the scientific resources related to the research and the course has been analyzed, and in light of this, the researcher prepared an educational curriculum according to the stages of the educational pillars strategy, which was presented to an experienced and specialized group in the field of teaching methods, learning and athletics. The curriculum was applied to the students of Intermediate second grade in Al-Qalaa Secondary School for Boys; this was done on two educational units per week and on (8) educational units. The researcher used the educational pillars strategy in teaching the experimental group, where temporary support is provided for learning during learning, with the help of (the teacher and peers) and then left to complete the rest of his learning depending on his own. In the control group, the researcher did

not interfere in the development of the educational curriculum for the control group; he relied on the curriculum that was established to teach the technical performance of the effectiveness shot put. The researcher was satisfied with the method used, as well as the safety of the application, due to be present in the lectures and without interfering with the course of the educational unit, which was based on the explanation and presentation of the model by the teacher of the subject. The time of the educational unit was 45 min, and the time of the educational unit was divided into the preparatory section (15 min), the main section (25 min), and the final section (5 min), and the educational curriculum began on 12/4/2019 and ended on 12/30/2019.

After completing the application of the program, the post-test of the research sample (experimental and control) was conducted on 12/31/2019 in Al-Qalaa High School for Boys At 10:00 AM, the technical performance test was applied to the shot put, in order to identify the effectiveness of the program used in improving skill performance by shot put.

Evaluating the skill performance of shot put for the research sample, was conducted by three evaluators who are

experienced and specialized in athletics due to the difficulty of collecting three assessors in one day and for several times, each one of them used the performance assessment form prepared by (Al-Araji, Y, H, 2006) [1] after it was presented to an experienced and specialized group in measurement and evaluation. The form was prepared to give a score to each student for each attempt at technical performance, and their

average score was taken to show each student's score.

**Data analyzes**

The statistical package (SPSS) version (28) was used to analyze the research data as follows: (Arithmetic mean, standard deviation, percentage, t-test for independent and correlated samples).

**The results**

**Table 2:** Presents the results of pre and post- test for the experimental and control groups

The group	Arithmetic mean	Standard deviation	Degree of freedom	Calculated t value	Sig	indication
Pre-test (experimental group)	37	3.24	11	20.89	0.000	significant *
Post -test (experimental group)	55	2.66				
Pre-test (control group)	36.91	2.31	11	7.11	0.000	significant *
Post -test (control group)	42.91	2.53				

\* Insignificant because the value of (sig) is smaller than (0.05).

**Table 3:** Presents the results of post- test for the experimental and control groups

The group	Arithmetic mean	Standard deviation	Degree of freedom	Calculated t value	Difference of arithmetic means	Sig	Indication
Post -test (experimental group)	55	2.66	22	11.37	12.083	0.000	significant *
Post -test (control group)	42.91	2.53					

\* Insignificant because the value of (sig) is smaller than (0.05).

**Discussion**

After presenting and analyzing the results of the pre- and post-test and for the two research groups (experimental and control), which were shown in Table (2), it was found that there are significant differences between the pre- and post-tests toward the post-test. This is what seems clear from the two research groups, especially from the experimental group that used the educational curriculum according to the educational pillars strategy. The researcher attributes this difference to:

- The completeness of the educational curriculum and its inclusion of selected exercises in a scientific manner and with correct and consistent repetitions that are agreeing with the level and capabilities of the members of the sample members and based on correct practice. "Exercises that are consistent with the nature, conditions and motor duties of the skill are the right way to ensure progress in objective conditions on which the educational and training process depends on approaching the form and method of performance to raise the level of the learner and confirm the positivity of education through these exercises." (Al-Araji YH, 2006) [1].
- One of the factors that helped in achieving the learning for the members of the research sample is the impact of learning according to the educational pillars strategy, which depends on organizing the learning process and making it clear, making it easier for learners to comprehend it. It helped to link the new knowledge with the pre-knowledge of the students about the skill. It also gives a new curve for linking concepts and correcting misconceptions, and it also has a kind of challenge appropriate to the minds of students. The changes in the environment that accompany the strategy of educational pillars make students more attracted to attending the educational units, which improves their understanding of the parts of the skill and leads to mastery it completely.
- As for the development in the control group, the researcher attributes it to practicing the exercises that

were prepared by the trainer, which had an impact on the occurrence of this development.

After presenting and analyzing the results of the skill test by shot put in the post test, which were shown in Table (3), it was clear that there are significant differences between the two research groups toward the experimental group in the skill test. The researcher attributes these differences to the effectiveness of learning by using the educational pillars strategy, which helps to provide the appropriate environment that is in harmony with the brain and also takes into account the higher mental processes that the brain does it during the acquisition of skills. It depends on educational stimuli that contribute to improving the ability to learn and make decisions. This helps the brain to respond to various educational situations, and to create better learning by placing the student in an educational environment that matches his abilities and inclinations, as well as an environment that represents a structured learning theory to help students to expand their mental abilities, and form positive attitudes toward thinking and learning.

The educational pillars strategy enabled students to move between its stages freely and in a gradual manner, from easy stage to the more difficult stage. And (Mohammed, S, A, 2016) [5] thinks that "the educational pillars strategy is one of the educational applications of the constructivist theory, In which the concentration is on how to acquire knowledge, on making meaning of different phenomena, on the importance of social structure of knowledge and on encouraging competition during the lesson, and looking at the learner with a broad view. The educational pillars strategy emphasizes that learning can only take place by recognizing the learner's previous experiences and starting from these previous experiences toward the active learning and social learning, whether with the teacher or with peers, and then reorganizing the learner's experiences to move to the stages of Self dependence, and achieving continuity of learning by providing temporary assistance to the learner". (Mohammed,

S, A, 2016) <sup>[5]</sup> The educational pillars are one of the educational systems that emphasize the dynamics, movement and interaction of learners in educational-learning situations, because the educational activities and materials are provided according to the learners' abilities, capabilities and preparations, as well as their previous knowledge backgrounds. The educational pillars aim to satisfy the needs of learners and increase their motivation toward education; this will increase their experience and develop their skills and abilities.

The concept of educational pillars is based on providing temporary assistance that the learner needs, and assistance may be in the form of hints or guiding information with the intent of providing him with some skills and abilities that enable him to continue his learning. Then he will be left to complete the rest of his learning alone, depending on his own abilities to discover new concepts and knowledge (Nwosu BO, Azih Nonye, 2011) <sup>[11]</sup>.

The development and difference of the skill performance in shot put with the experimental group is much greater than what happened with the control group and this is due to the exercises prepared by the researcher and based on scientific foundations, through organizing exercises according to the educational pillars strategy in accordance with the students' capabilities and their physical and mental abilities. And this, in turn, developed their level of skill performance on the one hand, and on the other hand, the continuous correction of technical errors and the performance of exercises aimed at reducing these errors and giving feedback of both kinds (information about performance and information about the result), "The exercise certainly will develop the achievement, if it is built on a scientific basis in organizing the training process and its programming, as well as using the optimal repetitions and effective periods of rest." (Ismail, S, M, 1996, 98) <sup>[4]</sup>.

### Conclusion

The results of the study indicated that the educational method that is based on the educational pillars strategy helped the members of research sample in learning some skill performance in shot put among the members of the sample. The experimental group that learned the educational pillars strategy also exceeded in learning the art of performance in shot put. It also indicated that learning according to the educational pillars strategy will activate the motor program of the studied skill, as well as learning in an organized way. According to the results of the study, the researcher recommends the necessity of using the educational pillars strategy in learning all other activities of throwing in athletics, and the necessity of using the educational pillars strategy in activating the motor program for the studied skill studied, and also to conduct similar research on different samples.

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