



The Effect of Proposed Device on Controlling Shooting Arm Motion's For Youth Basketball Players

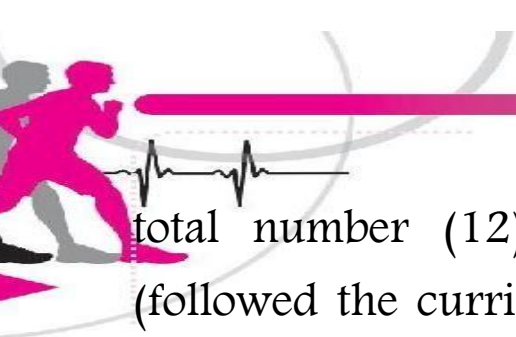
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Abstract :

Background .The research problem determined by youth basketball players' ,of basketball school in Babylon, jump shot performance that they had a problem in controlling the elbow direction of their shooting arm motions that causes inaccuracy in performing the skill. Objective. Set up an aid device trying to control the shooting arm motion in jump shot and adjust elbow direction and identifying the effect of using these devices on improving the accuracy of jump and shoot (free throw) for basketball youth players. Method . the experimental approach in the design two equal groups was followed for its suitability to the research type. Selecting the research sample is one of the basic aspects that researchers must take into account, The study carried out on the players of basketball school \ Babylon. Their

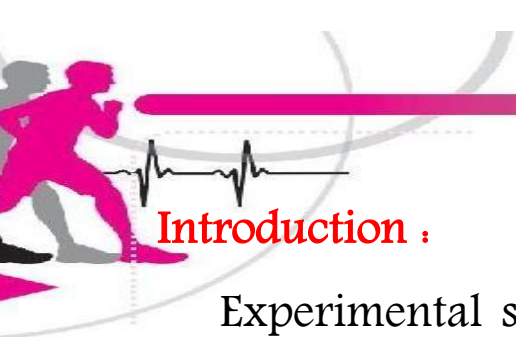


total number (12) divided into two equal groups, control (followed the curriculum prepared by the coach without using the aid device) and experimental group (followed the curriculum prepared by the coach and the proposed aid device for improving the accuracy of jump shot "free throw "). 6 players for each The training curriculum continued for (5 weeks) from 3/9/2018 to 8/10/2018, (4) units per week, thus the total number of training units were (20) training units, the unit time was (90) minutes, the practical side time was (50) minutes. And the time of experimental group players who used aid device was (30) minutes. The researchers used a number of aid devices and tools in this study (Arabic references, Internet, observation and experimentation , Basketball court and (Molten 6) Basketballs) as well as using appropriate tests to measure the discussed skills, they adopted the curriculum prepared by the coach then they used the proposed method within the application side of the training unit .The training curriculum started from 2/8/2018 to 5/4/2019, (4) training units per week at Martyr Hamza Nuri Sport Hall\ Babylon Results. After completing the experiment, the researchers used appropriate statistical means (2:178) (Arithmetic mean, Standard deviation, Independent Samples T test, Paired sample t-test and Percentage of increase) to extract the results and then recorded it in tables. Conclusions. The method has a positive effect in increasing the accuracy of jump



shot for basketball youth players. And there is a noticeable rate of skill development.

Keywords: Basketball, aid device, Shooting arm motion's



Introduction :

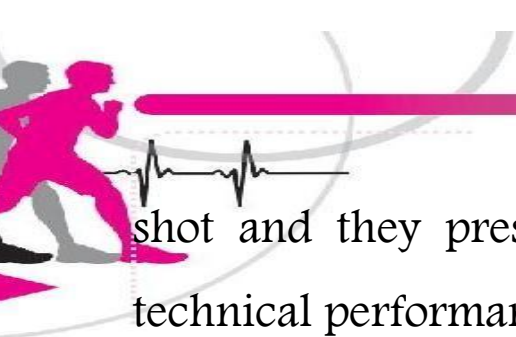
Experimental studies have a great role in developing the scientific and practical aspects, contributing to that with the improvement of the applied field of society. Sports activities are also taken as an aspect of life by the causes of science and its methods to solve its problems based on its freedom in an effective development direction . In basketball offensive skill represents an important skill in the game . The game cannot be practiced without mastering that skill with a specific strategy and methods without wasting time and effort. Therefore, researchers have tended to find various methods aimed at developing the educational process, including the use of aid devices and tools that contribute in facilitating learning and training processes by increasing the experiences without wasting time and effort exerted by the players and the trainer.

shot accuracy test:

The researchers used standardized tests that used many times previously; these tests were reliable, valid and objective in measuring the skill.

Jump shot technical performance measurement :

For the purpose of measuring this skill the researchers photographed the sample while they were performing the jump



shot and they presented it to specialists for evaluating the technical performance of shot arm motion through jump shot .

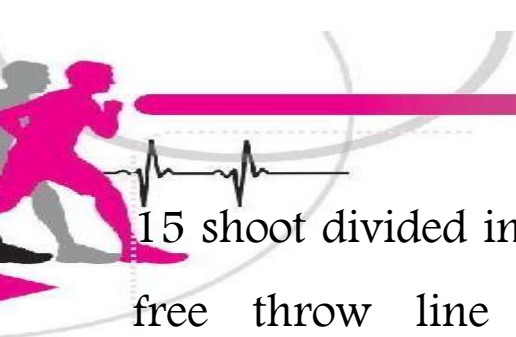
Jump shot test (1:120):

- The test start from the beginning to the left of the free throw line, then move semicircular to the center and right of court .
- Test aim: to measure jump shots accuracy .
- Tools: basketball court, tape measure, 5 basketballs , basketball net , chalk.

Procedure:

- Drawing three points symbolized a small circles of (15 cm) as signs indicating the three areas in which the test is performed, as follows
- The first point : on left of free throw line , at a distance of (30 cm)
- The second point : in the middle of free throw line , at a distance (90 cm) from the free throw line towards the three-point line the third point : on the right of free throw line , at a distance of (30 cm).
- The testee stands outside the free throw area on the left , the ball too .

then he performed the jump shot by one hand send the ball upward to the basket without touching the board .Testee made



15 shoot divided into equal 3 groups . the first group from left free throw line at a distance of (30cm) (imaginary line represents the extension of free throw line across the width of the court) , the second group the middle of the free throw line , at a distance (90 cm) (imaginary line of free throw line) and the third group from the right of free throw line , at a distance of (30 cm) (imaginary line represents the extension of free throw line . as shown in figure (1) .

Test management:

Registrar calling players names and recording their results , referee stands with the player to give him the ball .

Scoring:

- ✚ Two points for correct shoot.
- ✚ One point is counted for every shoot touches the edge of the board or the ring, but does not enter the goal.
- ✚ No points rewarded if the ball does not touch the board or the basket or does not score a goal.
- ✚ The player's score equals the total points obtained in the 15 attempts.
- ✚ The highest score is (20) degrees .

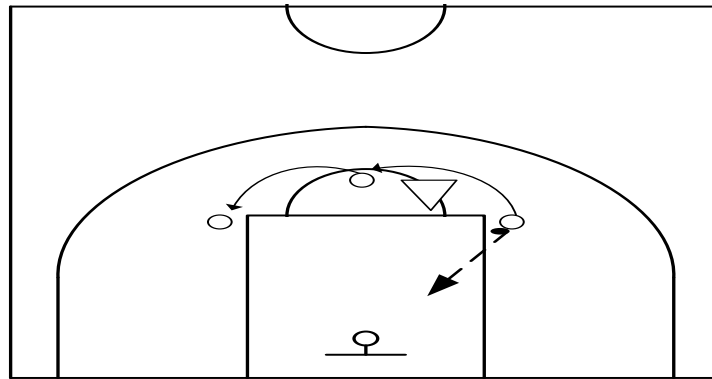
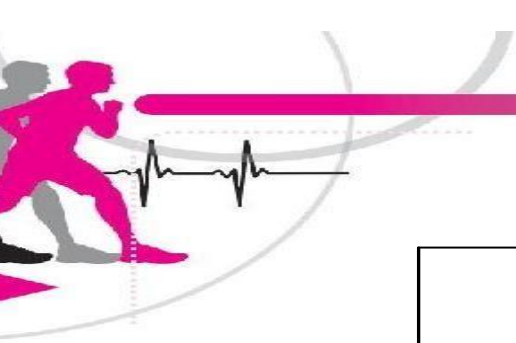
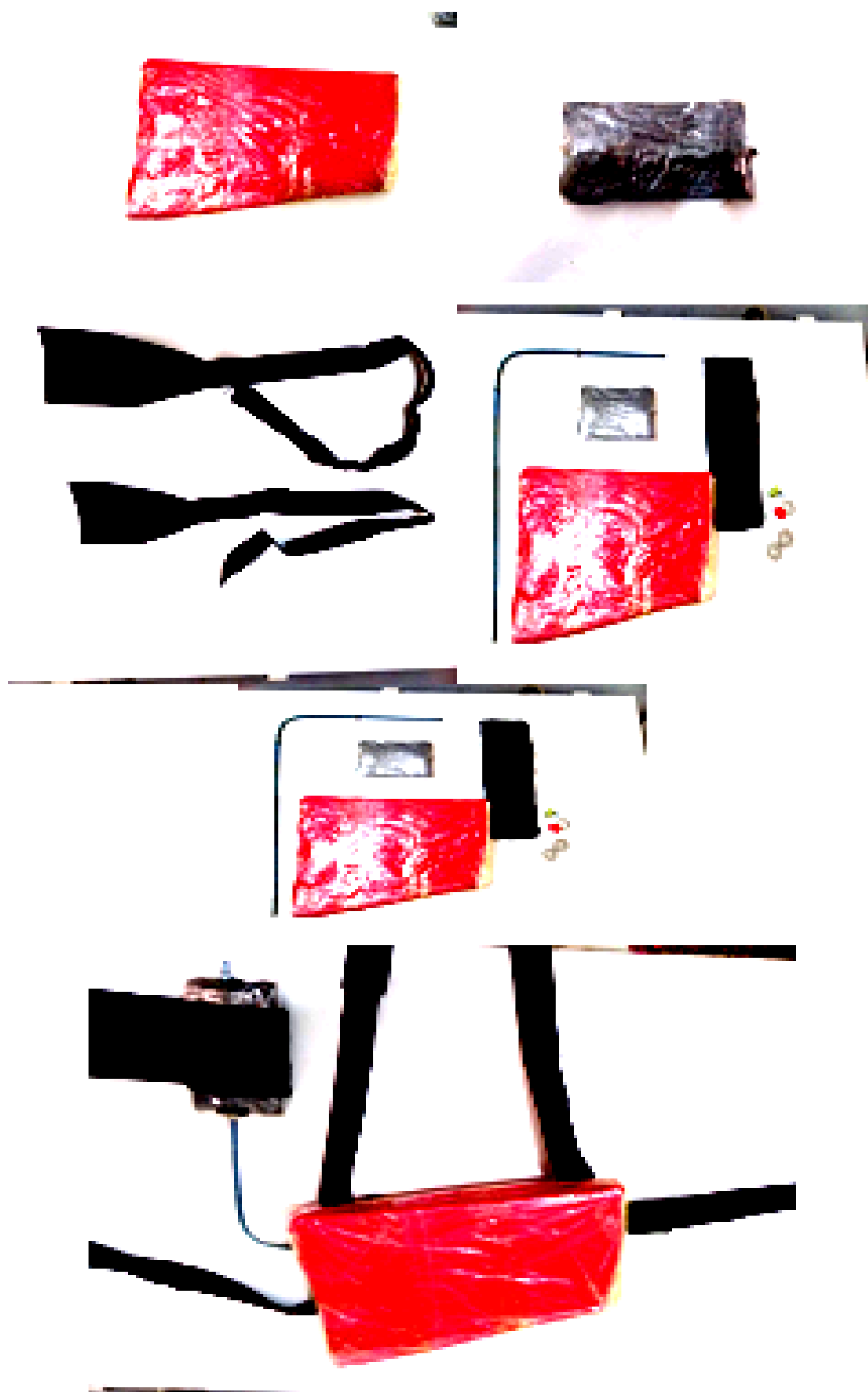


Figure (1)

Shows the procedure of jump shot test

The proposed device for controlling shooting arm motion's in jump shot:

Researchers began designing the proposal device after noticing the problem that faced youth and advanced basketball players, and the research was conducted on the youth players to solve the problem from its early stages. The design of the device was based on scientific sources, this idea tried out on a small sample initially, and then some adjustments were made to some measurements. Figure (2) shows the proposed aid device.



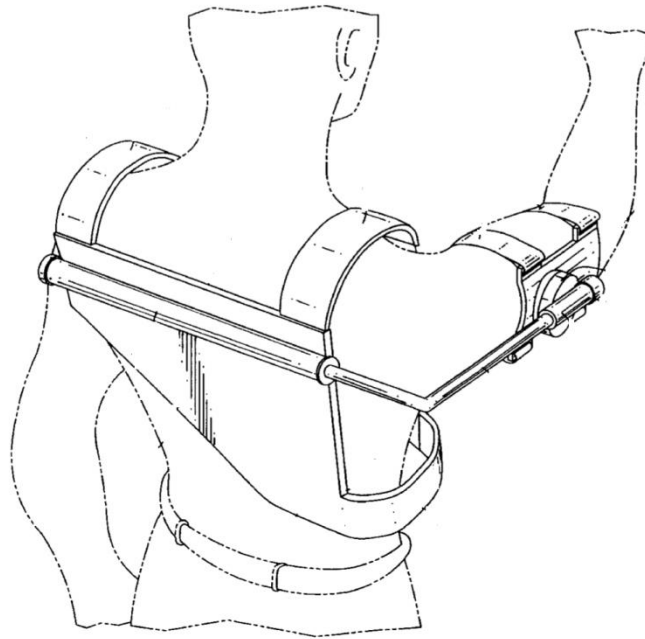


Figure (2) shows the proposed aid device

The proposed device is some tools set in a mechanical device consists of (L) shaped Screw extends along the player's back and reaches his shooting arm linked with nuts , elbow Pad that is attached to the player's arm and has small belts for the purpose of attaching the shooting arm, and this support is attached to the long screw,a base that is based on the player's back with a width of (50) cm and a leather belt connected to the base of the back pad for the purpose of attaching the device to player's torso who performed the jump shot .

pretests :

the pre-test was conducted for the members of the research sample in the accuracy of jump shot skill conducted on Thursday 1/9/2018, at Martyr Hamza Nuri Sport Hall\ Babylon.



Posttests:

On Sunday 10\10\2018 after completing all training units for improving the accuracy of jump shot the posttest was conducted for the control and experimental group and in the same conditions of the pretest.

Results:

The results of control group test:

The results of jump shot test of control group:

Table (1) Shows the results of shot tests of control group

Variable	Pretest		Posttest		Increase percentage	Calculated T value	Tabular T value	Sig.
Jump shot								
Technical performance	5	0.78	6.66	0.23	33.2%	3.99	2.57	Sig.
Accuracy	12.12	1	14.30	1.14	12.30%	4.550		Sig.

Df. (5) and sig. (0.05)

The results of experimental group tests:

The results of jump shot tests of experimental group:

Table (2) Shows the results of jump shot tests of experimental group

Variable	Pretest		Posttest		Increase percentage	Calculated T value	Tabular T value	Sig.
Jump shot								
Technical performance	5.2	0.59	8.83	1,13	75.62%	5.22	2.57	Sig.
Accuracy	12.76	1.32	19.87	2.48	41,22%	8.33		Sig.

Df. (5) and sig. (0.05)

Results of jump shot skill tests between control and experimental group tests:

Table (3) Shows the significant differences of shot skill posttest between control and experimental group

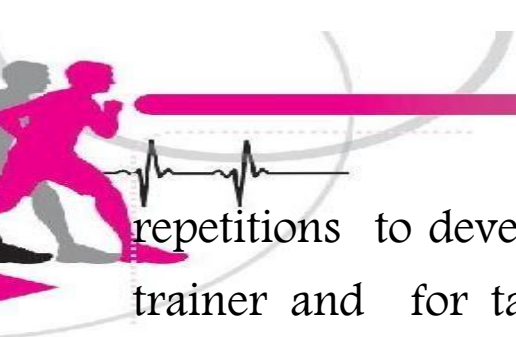
Variable	Pretest		Posttest		Increase percentage	Calculated T value	Tabular T value	Sig.
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Df (10), and sig. (0.05)

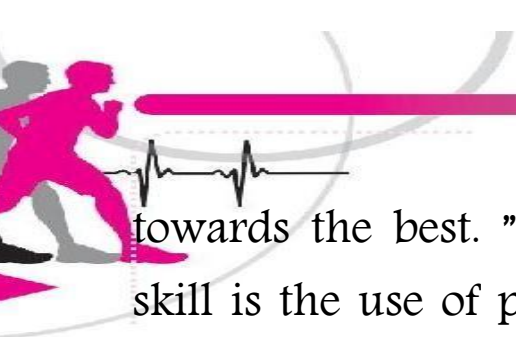
Discussion :

Discussion of jump shot test results' for control and experimental groups :

the results of tables (1,2,3) showed that the amount of improvement was clear and in good proportions for the control and experimental groups in increasing the accuracy of jump shot for youth basketball players, even though the two groups were followed to the same curriculum . Tables (1 and 2) showed that there was an improvement in the level of accuracy in the post-test compared to the pre-test and the achievement of good development rates for shot skill, but the improvement in the accuracy level of the experimental group was due to the use of the aid device (proposed tool) as an aid to the curriculum. Researches and studies have indicated that aid devices encourages individuals towards training as well as reducing required effort and time, and that the rate of improvement achieved by the control group was attributed by the researchers as a result of applying the used method that provides many



repetitions to develop the skill and present the model from the trainer and for table (2) of the experimental group, which followed the same method , it was found that there was an increase in the accuracy of jump shot in the posttest compared to pretest and achieving a good increasing percentage . The researchers attribute the rate of improvement that has been achieved by the experimental group due to the use of the aid device in the curriculum that works to force the player to place his shot arm in the right motion and on the same imaginary line that the player must perform while performing the jump shot , i.e. within the required movement path for the skill by maintaining the position of the elbow joint parallel to the player's body and heading to the basket this method perfectly simulates technical performance, led to improving shooting accuracy, which is the important thing by which scores can be obtained. which was mentioned by (Hanafi Mahmood (3:54). that continuity and repetition play an important role in reaching the player to the high level of technical performance of skill, accuracy, integrity and fixation of the mechanism of high technical performance, and that the use of the proposed device helped the player perform repetitions. Many also, the player's impulse towards the skillful performance of using modern and easy-to-use means and tools that he has never used before raises the player's curiosity in trying what is new, that is, the player performs repetitions with confidence and desire and work



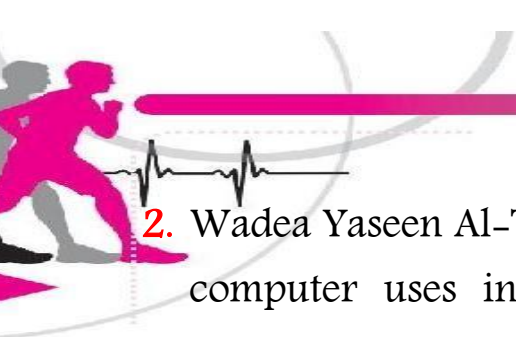
towards the best. "Among the basic principles in applying the skill is the use of potentials and tools to the maximum possible degree "(4: 189) The researchers agrees with (Yusuf Qatami 5: 207) that tools and aid devices make the player more focused on the skills to be learned and developed and help diversity and stimulate players to improve performance for the better. "This also agrees with ((Abdul Hamid Sharaf (7:86) " the use of devices and means in learning and training increases the achievement of the player's self-ability, which makes him not satisfied with less than the maximum effort he exerts, and it can improve performance and understanding aspects of the desired movement learn it, train on it, and highlight the general shape that the movement is supposed to be in during its correct performance.

Recommendations :

Using the proposed aid in developing and increasing accuracy of jump shot for youth basketball players and the necessity of using aid devices and tools in the educational and training process to ensure the diversity of the player's experiences , As well as conducting other studies and researches for different age groups, skills and for both genders in basketball.

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