

## **The effect of using suggested specific exercises on basic motor skills associated with the Lay-up-shot for children who are beginners in basketball**

**\*DR/ Ahmed Youssef Mohamed Hassan Ahmed**

### **Introduction and research problem:**

Childhood is one of the most important stages of life in a person's life, through which his personality is formed, his abilities and skills grow and his various developmental aspects develop. The child is the pillar of the state and an important element in its investments. Therefore, attention to this age period, which is the basic base on which the integrated building of the human being is completed, is one of the most important. The criteria by which the progress and development of a society is measured .

This comes through the researcher's experience in the field of basketball education at the Faculty of Physical Education, Assiut University, and through his work as a basketball coach for primary school students in an international school in the People's Republic of China, he noticed that there is speed in the kinematic response and progress in the level of technical performance in the performance requirements in a ball game. The basket quickly, which prompted the researcher to track the progression of the movement of students' movement through the reality of some records of students and personal interviews with some teachers. It was found that the greatest interest in the early age stages is in

sports activities for some movement activities through the pupils making a set of basic movements. Collectively, on the music inside and outside the school, which included a group of harmonic exercises in which the dimensions of the mathematical movement are taken into account and this is what he realized through his actual observation of the students.

To verify this, the researcher did some scientific procedures by applying some basic motor skills tests to an exploratory sample of (6) students practicing basketball activity, where the percentage of average scores for basic motor skills tests ranged between (78.28%: 97.65%) and this indicates the progress of students in basic motor skills, which led to the speed of the motor response in learning sports skills and the ability to develop motor performance, especially basketball.

While a good observer of the kinetic performance for children who are beginners in basketball in the Arab Republic of Egypt, especially in educational schools in Assiut Governorate, he notes that the level of motor performance is relatively slow in the movement response in general and the performance requirements in the basketball game, with no focus on the technical technique that appears

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\* Lecturer in the Department of Curriculum and Teaching Physical Education - Faculty of Physical Education - Assiut University.

through The rate of goal accuracy on fixed targets and the extent of smooth performance, as well as the reduction in effort spent when learning the skills of shooting in basketball.

The researcher attributes this to the lack of interest in developing basic motor skills associated with basketball skills, especially shooting, although it is not regulated and not directly related to the skill to be learned, compared to what the researcher observed in the People's Republic of China.

Where the researcher confirms that teaching basic motor skills is of great value in learning skill performance in various sports within the framework of the teacher's understanding of the type of exercises provided to children who are beginners in basketball.

And due to the importance of the Lay-up-shot in basketball among the basic skills and what it included in a set of basic motor skills associated with them, it required great time, effort and experience from teachers and trainers to develop a set of qualitative technical exercises in a gradual manner for the stages of motor construction of the skill that is easy and at the same time in the path Locomotor and muscular action to simulate performance.

This was mentioned by **Al Sayed Abdel-Maqsoud (1999 AD)** that several recent trends have emerged in the teaching of sports skills, and among these recent trends are qualitative education or the use of specific exercises of this type that reach the highest levels of specialization in the development of

skill and physical performance in quantity, quality and timing of performance according to the instantaneous uses For the muscles or muscle groups within the skill and physical performance of the specialized type of sports activity (2:11)

Through the researcher's briefing on some studies related to specific exercises and basic motor skills, such as the study of (1), (3), (4), (6) and to the best of the researcher's knowledge, none of them touched on the use of specific exercises in developing basic motor skills in various sports, especially Basketball, as the research results showed the positive effect of specific exercises used in the development of basic skills for different sports. This prompted the researcher to try to prove the extent of its impact if it was used in the development of basic motor skills related to the skill of Lay-up-shot for children who are beginners in basketball.

#### **Research Goal:**

The research aims to use the suggested specific exercises and their effect on the basic motor skills associated with the Lay-up-shot for children who are beginners in basketball

#### **Research questions:**

- 1- What are the basic motor skills associated with the Lay-up-shot for children who are beginners in basketball?
- 2- What are the technical specifications of the basic motor skills and the skill of the Lay-up-shot for children who are beginners in basketball?

3- What are the specific exercises suggested for developing basic motor skills associated with the Lay-up-shot for children who are beginners in basketball?

**Research hypotheses:**

1- There are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in the level of performance of basic motor skills associated with the Lay-up-shot for children who are beginners in basketball in favor of the post measurement.

2- There are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in the level of performance of the skill of Lay-up-shot for children who are beginners in basketball in favor of the post measurement.

3- There is a statistically significant relationship between basic motor skills and the skill of Lay-up-shot for children who are beginners in basketball.

**Research procedures:**

**1- Research Methodology:**

The researcher used the descriptive method as well as the experimental method using the experimental design of one experimental group, which is based on a comparison between the two measurements, pre and post, due to their suitability to the nature and conditions of the research.

**2- Research community and Sample:**

The research community included children who are beginners in learning basketball in the summer club at the Faculty of Physical Education, Assiut University, and their number is (63) beginners and The research sample was chosen by an intentional random way and their number reached (25) beginners, distributed as follows: (15) children For the basic sample, (10) children for the exploratory study from the research community and outside the main sample.

**Homogeneity of the research sample:**

The researcher conducted the homogeneity of the research sample in growth variables, the evaluation form for the Lay-out-shot and the basic motor skills associated with the skill under consideration, and the physical abilities through which it became clear that the value of the torsion modulus ranged between (-0.01:0.01) which is less than twice the standard error of the torsion modulus The value of the flocculation coefficient ranged between (-0.02:0.02), which is less than twice the standard error of the coefficient of kurtosis, which indicates the moderation of the sample distribution in the previous variables.

**Data collection methods and tools:**

1- Physical abilities tests.

2- An expert opinion survey form to identify the for basic motor skills associated with Lay-up-shot for children who are beginners in basketball

3-Technical performance evaluation form for basic motor skills and Lay-up-shot in basketball.

4- Suggested specific exercises:

- Analysis of the technical performance of the basic motor skills associated with Lay-up-shot, and the technical performance of Lay-up-shot in basketball.

- Defines working muscles for basic motor skills.

**The basic experiment and the pre and post measurements under consideration:**

- The Pre-measurements were applied to the variables under consideration on 22 and 23/7/2020.

- The implementation of the program began from 28/7/2020 until 2/9/2020.

- The post measurements were applied to the variables under consideration and the same was followed in the pre-measurement on 5/6/9/2020 AD.

**1- Display and Discuss the first and second hypothesis:**

**Table (1)**

**The significance of the differences between the mean scores of the pre and post measurements and the improvement rates for the experimental group in the level of basic motor skills and the Lay-out-shot for children who are beginners in basketball (N = 15)**

skills	parts	Measurement	Pre-measurement		post measurement		The difference between the two averages	T value	Improvement percentage (%)	
			Arithmetic Average	Standard Deviation	Arithmetic Average	Standard Deviation				
Basic motor skills	Stepping	Head	Point	٢.٣١	٠.٤٤	2.89	0.16	0.58	6.66	25.00
		Arms	Point	٢.٤٠	٠.٤٢	2.73	0.29	0.33	3.29	13.89
		Torso	Point	٢.٣١	٠.٤٦	2.89	0.16	0.58	6.47	25.00
		Legs	Point	٢.٠٧	٠.٦٩	2.76	0.34	0.69	4.65	33.33
	One foot jump	Head	Point	٢.٣٦	٠.٤١	2.89	0.21	0.53	6.09	22.64
		Arms	Point	٢.٢٤	٠.٥٤	2.78	0.24	0.54	4.77	23.76
		Torso	Point	٢.٤٠	٠.٥٢	2.82	0.21	0.42	4.02	17.59
		Legs	Point	٢.٠٢	٠.٧٣	2.73	0.29	0.71	4.90	35.16
	Balance	Head	Point	٢.٣٨	٠.٤٩	2.80	0.28	0.42	3.88	17.76
		Arms	Point	٢.٣٦	٠.٥٤	2.80	0.21	0.44	4.14	18.87
		Torso	Point	٢.٤٩	٠.٥٣	2.93	0.14	0.44	4.64	17.86
		Legs	Point	٢.٠٧	٠.٦٢	2.69	0.34	0.62	4.52	30.11
	Throwing from above	Head	Point	٢.٣٣	٠.٥٣	2.71	0.33	0.38	3.06	16.19
		Arms	Point	٢.٢٢	٠.٣٧	2.67	0.31	0.45	4.58	20.00
		Torso	Point	٢.٥٨	٠.٦١	2.96	0.12	0.38	3.63	14.66
		Legs	Point	٢.٠٧	٠.٥٠	2.71	0.40	0.64	4.76	31.18
The Lay-out in basketball	The introductory stage	Head	Point	٢.٠٧	٠.٤٦	2.69	0.27	0.62	6.02	23.14
		Arms	Point	١.٩٦	٠.٥٠	2.67	0.33	0.71	5.65	26.67
		Torso	Point	٢.٣٣	٠.٦٣	2.76	0.32	0.43	3.11	15.32
		Legs	Point	١.٧١	٠.٦٥	2.47	0.30	0.76	5.53	30.63
	The main stage	Head	Point	٢.٢٧	٠.٥٤	2.73	0.31	0.46	3.84	20.59
		Arms	Point	١.٦٤	٠.٦٦	2.31	0.29	0.67	4.89	40.54

Follow Table (1)

**The significance of the differences between the mean scores of the pre and post measurements and the improvement rates for the experimental group in the level of basic motor skills and the Lay-out-shot for children who are beginners in basketball (N = 15)**

skills	parts	Measurement	Pre-measurement		post measurement		The difference between the two averages	T value	Improvement percentage (%)
			Arithmetic Average	Standard Deviation	Arithmetic Average	Standard Deviation			
the final stage	Torso	Point	٢.٤٩	٠.٥٠	2.84	0.28	0.35	3.19	14.29
	Legs	Point	١.٤٤	٠.٥٦	2.11	0.37	0.67	5.02	46.15
	Head	Point	٢.٦٢	٠.٤٣	2.87	0.30	0.25	2.32	9.32
	Arms	Point	٢.٢٢	٠.٣٥	2.80	0.25	0.58	6.80	26.00
	Torso	Point	٢.٥١	٠.٤٢	2.80	0.30	0.29	2.81	11.50
	Legs	Point	٢.٣٦	٠.٦٦	2.76	0.34	0.4	2.79	16.98

The value of (T) Tabulated at 0.05 = 1.767 \* Function

It is clear from the results of Table (1) that there are statistically significant differences between the mean scores of the pre and post measurements of the experimental group in the level of basic motor skills associated with the Lay-out -shot for children who are beginners in basketball, and the level of performance of the Lay-out- shot in favor of the averages of the scores of the post-measurement, where the value of "t" Calculated for basic motor skills and for the skill under consideration, between (2.32: 6.80), with improvement rates ranging between (9.32%: 46.15%)

And The researcher attributes this improvement to the educational program that was applied to the sample (under consideration) and to the nature of performance that mainly depended on specific exercises for basic motor skills, which are performed similar to the nature of those skills and identical to the same movement paths, which leads to the availability of a level in the

method of technical performance and Physical abilities., which was provided by specific exercises within the program.

As specific exercises are one of the recent trends that help to raise the level of many skillful performances in various sporting activities and this type of exercise reaches the highest levels of specialization in the development of skill and physical performance, as well as timing for performance according to the instantaneous uses of the muscles or muscle groups within the skillful and physical performance of the practitioners The type of sports activity, and specialized studies and references have agreed on the importance of studying the physical determinants as a basis for developing educational programs through exercises that are characterized by a style that is very similar to the technical and kinetic performance of the sporting activity used (5: 11, 65)

The researcher attributes the high rate of improvement in the level of

performance of the Lay-up-shot for children who are beginners in basketball between the pre and post measurements of the experimental group to the positive effect of the proposed program and the specific exercises it contains designed in a standardized scientific method that led to the development of basic motor skills related to the skill, as it was designed in light of the similarity of performance according to the technical analysis of basic motor skills after dividing them into parts (head, arms, Torso, and legs), provided that these exercises include muscle groups involved in motor performance while performing the skill.

The researcher believes that if these exercises are carried out in an integrated manner, the beginners will perform the best skills during the exercise, and this confirms the importance of specific, targeted movement exercises and the amount of specificity in this type of modern exercises which the researcher sees as the beginning of the future for the development of basketball skills in general and the Lay-out shot in particular. This is the conclusion of the researcher from the increase in the rates of improvement of the experimental group and so, the first and second hypotheses are achieved.

## 2- Display and Discuss the Third hypothesis:

**Table (2)**

**The significance of the differences between the two post measurements of the first and second group in the level of basic motor skills and Lay-out- shot in basketball (N = 15)**

skills	Variables		The Lay-out- shot			
			Head	Arms	Torso	Legs
Basic motor skills	Stepping	Head	.792**	.738**	.832**	.760**
		Arms	.880**	.868**	.831**	.903**
		Torso	.792**	.738**	.832**	.760**
		Legs	.792**	.792**	.865**	.861**
	One foot jump	Head	.711**	.651**	.957**	.721**
		Arms	.849**	.881**	.816**	.922**
		Torso	.818**	.823**	.842**	.869**
		Legs	.819**	.868**	.874**	.860**
	Balance	Head	.878**	.803**	.883**	.851**
		Arms	.816**	.854**	.806**	.879**
		Torso	.712**	.602**	.856**	.716**
		Legs	.874**	.872**	.886**	.897**

Follow Table (2)

**The significance of the differences between the two post measurements of the first and second group in the level of basic motor skills and Lay-out- shot in basketball (N = 15)**

skills	Variables	The Lay-out- shot			
		Head	Arms	Torso	Legs
Throwing from above	Head	.865**	.854**	.731**	.861**
	Arms	.911**	.943**	.718**	.881**
	Torso	.559*	.551*	.776**	.632**
	Legs	.855**	.782**	.889**	.874**

The value of (v) Tabulated at 0.05 = 1.761 \* Function

It is clear from the results of Table (2) that there is a statistically significant direct correlation between basic motor skills and the Lay-out shot in basketball for the sample under consideration, as the calculated value of "v" ranged between (0.55: 0.96), which is greater than the tabular value "v". This indicates that the improvement in the level of basic motor skills is related to the improvement in the performance of the Lay-out- shot for children who are beginners in basketball.

Farida Ibrahim Othman (2011) and Smith, quoting the scientist Rink (1999) agree that the basic motor skills that a child learns depends on learning and mastering the different skills and movement patterns used in sports and games, so it should not be The teacher moves the child from the stage of learning basic motor skills to the skills of games and sports except after the child learns and reaches a high degree of mastery of these basic motor skills through the different stages, starting from the exploration stage until he reaches the mastery stage, the child

goes through specific levels of learning to reach performance And mastering the motor skill. (7: 13) (8: 1)

#### **Conclusions:**

- 1- The suggested use of specific exercises contributed positively to develop basic motor skills associated with the Lay-out- shot in basketball.
- 2- The suggested use of specific exercises contributed positively to improve the level of learning of the Lay-out- shot for children who are beginners in basketball.
- 3- There is a statistically significant positive relationship between basic motor skills and basketball skills, as the calculated value of "v" ranged between (0.55: 0.96), which is greater than the tabular value of "v". This indicates the correlation of improvement in the level of basic motor skills with an improvement in the level of The Lay-out- shot performance for children who are beginners in basketball.

#### **Recommendations:**

- 1- Giving attention to develop basic motor skills before starting to teach basic skills in basketball.

2- Giving attention to use the specific exercises in developing basic motor skills for children who are beginners in basketball because of their positive effect on the speed of the motor response in learning basic skills in basketball.

3- Doing similar research on other skills in basketball and other sports.

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