

STUDY ON THE ROLE AND IMPORTANCE OF MOTOR SKILLS IN THE GROWTH AND DEVELOPMENT OF MORPHO-FUNCTIONAL INDICES AT THE AGE OF 11-13

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Abstract

There was always a strong connection between the child's growth and his development. The teacher made this connection possible through patience, trust, endless monitoring, the discovery of innate abilities, and their exploitation. We chose the tools for improving the motor qualities in the growth and development of the morpho-functional indices at the age of 11-13 years according to the existing material base and to the particularities of the middle schooler. We can conclude that games are precious educational tools and teachers should use them more and more during their classes due to their strong positive effect on pupils' personality and development; motor skills in the growth and development of morpho-functional indices at the age of 11-13 play a decisive role in our students' harmonious development and integration into society.

Introduction

The interdependence between physical exercise, play, and work leaves its marks throughout the entire child's life. The consciously and gradually repeated movement based on realistic goals turns into physical exercise. Games rely on physical exercises and children's involvement. They are not just a simple way of having fun. Their theme, dynamism, creativity, and certain rules help the teacher reflect on the meaning and the beauty of life. Games are useful pedagogical tools that reveal the child's skills, gifts, and aspirations. They help him decide what career to choose.

Teachers use various games with children between 11-14 years old to identify their innate talents, their performant, and successful abilities [5].

The development of physical skills should begin from an early age and continue as long as possible till efficiency is reached. It should be done according to a well-structured program, to the kids' age and growing bodies [4].

The purpose of this study is to highlight the role and importance of motor skills in the growth and development of morpho-functional indices at the age of 11-13 years. The aim of modernizing the training mechanism of the young generation is the increased efficiency, the optimal benefit, and the appropriate response within the society it evolves. The child's educational and training process needs to be carried out so as to help him to integrate into a constantly changing society. My research focuses on the role movement games play in the students' motor training course. Its objectives are:

1. To study the theory, the practice, and the way the instructional-educational training takes place during the Physical Education classes in primary and secondary schools.
2. To assess the students' degree of motor training, physical development, and functional state.
3. To identify the proper content of the movement games used for children according to Physical Education curriculum.
4. To argue and verify their effectiveness in teaching motor activities.

My scientific paper concludes that sports motor activities represent the main core of Physical Education, contribute to students' well-being, help them acquire multiple competencies and abilities like skill, speed, resistance, strength, and suppleness.

It was assumed that if we use movement games with our students of different ages (11-13 years old), the instructive-educational activity will be considerably improved, the assimilation of motor skills will be qualitative and fast, the morpho-functional indices and basic motor qualities will increase. The teacher should elaborate guided and controlled individual tasks. He has to assign them as homework, check them regularly, and ask his pupils to present them [1].

I tried, in my work, to give a more detailed approach to this challenging topic from the specialized literature, to fix the working stages, to identify the motor capacity according to the characteristics of the 11-13-year-old schoolboy, to select the appropriate tools to achieve and improve the established objectives, to evaluate the subjects, to analyze and interpret the data obtained after their initial and final assessment.

The study took place in Dumbrăveni, Suceava between September 2021 and June 2022. The activities with the subjects were held in a specially equipped room, and when the weather allowed, on the school sports field in the open air. I used a sample of ten children between 9 and 13 years old with following anthropometric characteristics (table 1).

Table 1. Anthropometric data of the subjects

No.	Name and surname	Age	Height	Weight
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		(years)	(cm)	(kg)
1.	A.M	11	139	31
2.	G.I	11	156	41
3.	H.E	11	145	31
4.	M.S	11	142	37
5.	T.A	12	147	42
6.	P.I	12	162	58
7.	S.C	12	146	41
8.	C. D	13	156	43
9.	I.M	13	158	49
10.	R.D	13	160	44

The general and specific Physical Education methods used to achieve my goals were:

- analysis of the specialized literature/biographical documentation;
- observation;
- static-mathematical methodology;
- graphic.

Material-method

I chose the tools for improving the motor qualities in the growth and development of the morpho-functional indices at the age of 11-13 years according to the existing material base and to the particularities of the middle schooler.

The exercises for the abdominals were done lying down and using a stick. The stick was stuck at its ends. The arms stretched obliquely forward, the outstretched legs rose slightly (1) touching the tips of the stick (2, 3), and then they returned to the initial position. (4). It took 30” to do such exercises [2].

The number race. Players were divided into equal teams. They lined up and sat. Then they received numbers. The teacher called out a number. The children who had the number, stood up, ran, walked around their mates and sat. The kid who sat first won. The side they went out and come back to their seats was set in advance. This game can be played for 4-5 minutes till all the numbers are called out [3].

”One, two, three, run!” It is a 4-5minute game in which the kids sit two by two in a row one behind another holding their hands. One stays in front and shouts”One, two, three, run!” When he screams”Run!”, he claps his hands. The last pair hears the command, unholds their hands, runs, and stops in front of their colleagues. The front pupil holds the unpaired mate and stops. The player who comes last says”One, two, three, run!” and another pair runs again [4].

”Jump the stick” game. Players are divided into two or more teams. Two kids hold a stick in their hands and bend it to their knees. When they hear the whistle, they move around and try to make the other players step over the stick. When they

reach the last player, one stays at the end of the line, and the other returns with the stick. He passes it to the next, who starts in the same way as the first. The game ends when the first player comes in front of the row again. The players have to jump over the stick each time. They have to hold it at their knees' level. Each child does this 5-6 times [5].

''Carrying the wounded''. Pupils are divided into groups of three. Two players hold their hands to make a chair. The third sits on it and puts his arms around his colleagues' shoulders. The chair can be done with both hands or just one. The wounded can be carried not only this but also standing between the legs of the carrier with his armpits and knees grabbed. Each child will play the wounded twice [6].

Throw the ball back to your captain. Students work in teams. The captain passes the ball to the first student from his team. He catches it, passes back to his captain, and crouches. The captain does this with all his players. The crouching team scores a point. Each child plays the captain three times [8].

Results

If we compare the results with the scoring scales in the school curriculum, we notice a significant increase in the dynamics of evolution in terms of both initial and final tests and an upward curve in the evolution of the speed, strength, and throwing indices [7]. After applying the experimental physical training methodology during September 2021 and June 2022 and calculating the usual parameters for the study, the 10 subjects involved in the experiment obtained the following data (table 2):

Table 2. Pre and post test results

No.	Name and surname	Initial tests				Final tests			
		25/50 meters sprint (s)	Standing long jump (cm)	Throwing the ball (m)	Abdominal s (no. rep.)	25/50 meters sprint (s)	Standing long jump (cm)	Throwing the ball (m)	Abdominal s (no. rep.)
1.	A.M	5,72	125	10	11	4,9	134	16	21
2.	G.I	4,57	171	29	20	4,20	195	35	28
3.	H.E	5,18	140	17	13	4,66	158	22	20
4.	M.S	4,72	141	9	17	4,48	154	20	22
5.	T.A	8,53	131	13	10	8,16	140	22	17
6.	P.I	8,66	131	8	15	8,32	139	15	18
7.	S.C	7,95	161	19	18	7,56	169	26	21
8.	C. D	8,15	146	13	13	7,34	160	20	19
9.	I.M	7,80	171	14	14	7,47	180	19	19
10.	R.D	7,71	181	25	19	7,09	190	32	25
	X	6,89	149,8	15,7	15	6,41	161,9	22,7	21
	S	1,64	19,74	6,91	3,39	1,64	21,43	6,51	3,33
	Cv (%)	24%	13%	44%	23%	26%	13%	29%	16%

Discussions

In the 25/50 meters sprint, the subjects averaged 6.89 seconds at the initial test and 6.41 seconds at the final test, recording progress of 0.48 seconds.

In the standing long jump in the initial test, the subjects achieved 149.8 cm, and in the final test 161.9 cm, achieving progress of 12.1 cm.

When they threw the ball in the initial test, the subjects achieved 15.7m, and in the final test, 22.7 which means they progressed by 7m.

In the abdominals, at the initial test the subjects obtained 15 executions, and at the final test 21 executions, progressing with 6 executions.

If we look closely at the above data in the initial and final testing, we see the subjects involved in the study made real and visible progress with good perspective to develop their physical fitness [9,10].

Conclusions

Following the conducted study, and the recorded data, we can conclude that:

1. the present scientific work shows each child's evolution during the applied tests;
2. games are precious educational tools. Teachers should use them more and more during their classes due to their strong positive effect on pupils' personality and development.
3. motor skills in the growth and development of morpho-functional indices at the age of 11-13 play a decisive role in our students' harmonious development and integration into society.
4. School provides the best place for developing their physical and motor skills and we, the teachers, should do our best in this regard.

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