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## STUDY ON THE DEVELOPMENT OF MOTOR QUALITIES THROUGH GAMES AND GYMNASTICS ACTIVITIES

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### Abstract

**Problem statement.** Now more than ever, physical education aims first of all to make pupils exercise in order for them to develop and maintain an optimal state of health, to educate positive character traits, using all its resources, particularly gymnastics exercises and games as the main socialising factor.

**Methods of research.** The following research methods were used: observation, analysis and interpretation of data, application of motor evaluation tests.

1. Speeding 30 meters
2. Jump in the distance with laterally lifting the arms, for 30 seconds.

**Results.** The analysis of results obtained in this test, given the fact that it is an innate quality which can be improved by means of gymnastics exercises, entailed the achievement of better individual results, both for girls and for boys.

The analysis of initial individual results in this test of coordination, precision, performance speed, cardiorespiratory endurance had an upward trend both with girls and with boys.

**Conclusions.** The evolution achieved between the two tests is the result of using the means of gymnastics during physical education classes for 5<sup>th</sup> grade students, namely: exercises of general physical development, relays and movement games with acrobatic elements and basic skills specific to gymnastics, which required from students higher coordination and speed.

The upward trend of data gathered point to a beneficial influence of gymnastics means and exercises on the development of all forms of manifestation of the speed and coordination of middle-school pupils, thus confirming the study hypothesis.

**Keywords:** motor quality, physical condition, students.

### Introduction

The new directions in middle school require from specialists that they adapt the resources of physical education to the requirements of the didactic approach, of the training and age characteristics of children, with a view to developing and strengthening the body, to acquiring basic motor knowledge and skills, to providing a favourable working environment and an active and conscious participation of these children in their own preparation. (Cârstea Gh., 2000)

Now more than ever, physical education aims first of all to make pupils exercise in order for them to develop and maintain an optimal state of health, to educate positive character traits, using all its resources, particularly gymnastics exercises and

games as the main socialising factor. (Pehoiu C., 2005)

Physical education is “the activity of training and development of personality, designed and implemented in such a way so as to reach a fundamental value of human existence: physical and mental health, by aiming to maintain body health in relation to mental and ‘moral’ effects”. (Cristea S., 1999)

One of the fundamental elements of sports activities is gymnastics, present in people’s lives throughout their existence. (Chera-Ferrario B., 2010)

In this context, the gymnastics rediscovers, redefines and refines the human being, through conscious action unfolded for self-

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refinement. Through its peculiarities, purpose and effects, gymnastics is the essence of the movement of the human being, detached from permanent needs and aspirations.

Although the benefits of practicing exercise are unique in all ages, we still struggle with outdated concepts such as "not doing sports because it is sweating and cooling."

Sport it plays an important role and is a current matter as regards the education and development of motor, educational, mental attitudes and aptitudes of pupils. (SchiopuU&Verza E., 1995)

Driving qualities as well as basic skills are defining elements that need to be educated and developed from an early age. They have the role of shaping the body of children in growth, of developing the joy of practicing physical exercise.

Speed and coordinating capacity are two complex and different driving qualities. Every motric quality needs specific means, at the age of 10-11 years showing different forms of progress.

Repeated use of gymnastics and game exercises is extremely important as it develops all the child's individual structures

The middle school age is considered the favourable time for pupils to develop their general motricity, being characterised by receptiveness and flexibility of the instructive-formative process of school physical education. (Bota A., 2006)

Motricity in this period is overwhelming, with a remarkable learning ability, but with limited possibilities to fix new elements. Thus, through systematic repetition, the new motor structure is stabilized in the pupils' repertoire. (Dragnea, A. Bota, 1999)

#### **Methods of research:**

The following research methods were used: observation, analysis and interpretation of data, application of motor evaluation tests.

1. Speeding 30 meters
2. Jump in the distance with laterally lifting the arms, for 30 seconds.

#### **Results:**

The study underlying this paper was conducted during the physical education classes at "Rareş Vodă" Middle School in Ploieşti, Prahova County, in the 2017-2018 school year, on a group of 25 fifth-grade pupils, of whom 13 were girls and 12 boys.

#### **30-metre sprint run using the standing start**

The analysis of results obtained in this test (which, in fact, is an evaluation test in the National Assessment and Examination System), given the fact that it is an innate quality which can be improved by means of gymnastics exercises, entailed the achievement of better individual results, both for girls and for boys.

Tables 01 and 02 show the evolution of pupils' individual results, with a slight increase of values caused by the natural biological growth, and of the beneficial effects of physical exercises used in class.

The girls' group reached an average of 5.45 sec in the initials testing, which improved by 0.11 sec, i.e. an average of 5.43 sec, by the end of the study.

The boys' group had an average of 5.33 sec at the beginning of the study, hence better than that of the girls by 0.12 sec, and of 5.21 sec in the final testing, 0.13 sec better than the girls (Table 02).

#### **Jumps up and down, legs spread apart, arms lifted at the sides**

The analysis of initial individual results in this test of coordination, precision, performance speed, cardiorespiratory endurance had an upward trend both with girls and with boys.

As regards the girls, the values range between 21 and 27 performances, with a group average of 24.15 executions. In the final testing, the values achieved are between 23 and 33 executions, therefore an average of 28.69 executions, i.e. an increase of 4.54 executions (Table 1).

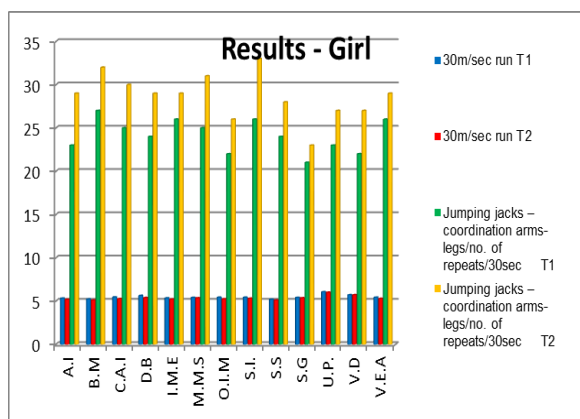
As regards the boys, initial results vary between 21 and 28 executions, while the final between 23 and 31 executions. The group average in the initial tests is 23.5 executions, while in the final test it is 26.75, i.e. an increase of 2.67 executions (Table 2).

The evolution achieved between the two tests is the result of using the means of gymnastics during physical education classes for 5<sup>th</sup> grade students, namely: exercises of general physical development, relays and movement games with acrobatic elements and basic skills specific to gymnastics, which required from students higher coordination and speed.

The upward trend of data gathered point to a beneficial influence of gymnastics means and exercises on the development of all forms of manifestation of the speed and coordination of middle-school pupils, thus confirming the study hypothesis.

Table 1. Results obtained in the physical tests applied to 5<sup>th</sup> grade pupils – *girls*

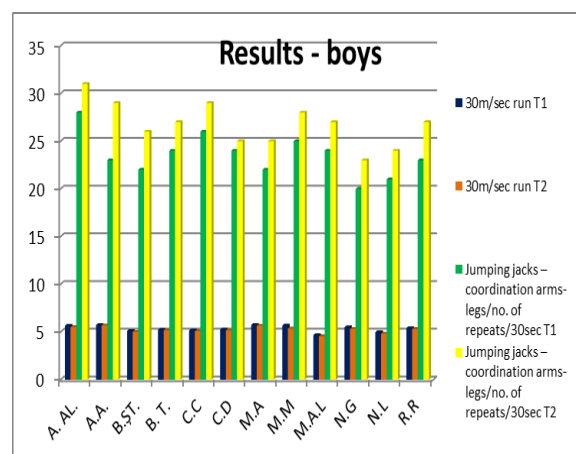
Girl						
No.	Initials	Year of birth	30m/sec run		Jumping jacks – coordination arms-legs/no. of repeats/30sec	
			T1	T2	T1	T2
1.	A.I	2005	5.32	5.18	23	29
2.	B.M	2005	5.22	5.10	27	32
3.	C.A.I	2005	5.45	5.25	25	30
4.	D.B	2005	5.62	5.38	24	29
5.	I.M.E	2005	5.34	5.20	26	29
6.	M.M.	2005	5.40	5.35	25	31
7.	O.I.M	2005	5.42	5.23	22	26
8.	S.I.	2005	5.42	5.30	26	33
9.	S.S	2005	5.18	5.10	24	28
10.	S.G	2005	5.40	5.35	21	23
11.	U.P.	2005	6.05	6.0	23	27
12.	V.D	2005	5.70	5.70	22	27
13.	V.E.A	2005	5.42	5.28	26	29
<b>Average (X)</b>			<b>5.45</b>	<b>5.34</b>	<b>24.15</b>	<b>28.69</b>
<b>Difference</b>			<b>0.11</b>		<b>4.54</b>	



Graphic 1 – Results - girls

Boys						
No.	Initials	Year of birth	30m/sec run		Jumping jacks – coordination arms-legs/no. of repeats/30sec	
			T1	T2	T1	T2
1.	A. AL.	2005	5.64	5.51	28	31
2.	A.A.	2005	5.72	5.68	23	29
3.	B.ȘT.	2005	5.09	5.01	22	26
4.	B. T.	2005	5.22	5.17	24	27
5.	C.C	2005	5.15	5.08	26	29
6.	C.D	2005	5.26	5.16	24	25
7.	M.A	2005	5.73	5.66	22	25
8.	M.M	2005	5.68	5.36	25	28
9.	M.A.L	2005	4.65	4.55	24	27
10.	N.G	2005	5.48	5.32	20	23
11.	N.L	2005	4.98	4.82	21	24
12.	R.R	2005	5.40	5.3	23	27
<b>Average (X)</b>			<b>5.33</b>	<b>5.21</b>	<b>23.5</b>	<b>26.75</b>
<b>Difference</b>			<b>0.12</b>		<b>3.25</b>	

Table 2. Results obtained in the physical tests applied to 5<sup>th</sup> grade pupils - *boys*



Graphic 2 – Results - boys

### Conclusions and proposals

Following targeted school physical education becoming "the basic form of physical education preparatory for long term, which means a lifestyle, a way of thinking and acting for their own benefit, but also which means the social interest." (6)

The study applied to a class of fifth-grade students has emphasised the following conclusions:

1. Through its specific, complex and diversified content, through the quality and multitude of forms of practice, gymnastics has become a permanent presence in physical education lessons, thus contributing to the education and development of physical qualities and motor skills in close correlation with the educational goals.

2. The analysis of the study results confirms the hypothesis according to which the use of movement games and gymnastics exercises can lead to high quantitative and qualitative progress as regards the development of the physical qualities speed and coordination.

3. The analysis of data obtained in the two tests applied has allowed us to draw the conclusion highlighting the values of the studied indices, which have increased in both the girls' and the boys' case.

### Proposals

We believe that this paper emphasises the role and influence of gymnastics exercises in the development of the motor qualities speed and coordination, an influence which depends on the particularities of content and form of that particular exercise.

Therefore, we propose that movement games and gymnastics exercises should be chosen and given a greater importance in fifth grade physical education classes, thus achieving a gradual transition from primary education to middle school.

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