

***DEVELOPMENT OF MOTOR QUALITY RESISTANCE UNDER
ALL ITS FORMS OF MANIFESTATION THROUGH SPECIFIC
WAYS OF ATHLETICS IN THE
GYMNASSIC CYCLE***

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Key Words: students, motor quality, methods, athletics.

Abstract: Physical education alongside other fundamental motric activities in the field is an integral part of the measures for harmonious physical development and maintaining an optimal health status for all categories of population. In this study I have studied the extent to which the treatment of the development of the motor quality resistance under all its forms of manifestation through athletic methods has the potential to improve the individual motor ability in the physical education lesson at the level of gymnasium students. I also wanted to implement some resistance development programs in physical education lessons using a number of methodological variants.

Introduction

The recent literature is rich in studies, articles and papers that analyze the content and ways of organizing physical education and sports. It implies finding new methods and means to act in the continuous practice and improvement of the existing ones, of the so-called classic, traditional ones based on the new objectives underlying this educational object.

In the present conception, practicing physical exercise is an appropriate form, perfectly adapted to the needs of life, ensuring the formation of a valuable luggage of driving skills useful in life, in the natural environment of quenching and fortification of man.

The term resistance, understood as the acquisition of human movement, is a complex motor skill with special implications in social and sporting life. Resistance is considered by the specialists as "man's ability to adapt and to sustain a long-lasting effort, which involves the development of phenomena that ensure

the balance of biological processes within the time required to carry out the effort." [1,2, 3.8]

In this regard, many specialists highlight the importance of fatigue, considering it as a factor limiting the effort. From this point of view, the resistance is considered by T., Ardelean, 1981, as "man's ability to cope with the physical fatigue caused by the muscular activity carried out in an effort of specified intensity and determined regime, without changing the prescribed intensity " A., Dragnea, S., Mate-Teodorescu, in 2002, as "the psychophysical capacity of the performer's body to cope with fatigue, specific to the work done"; D., Buiac, as "the capacity or aptitude of the human body to cope with fatigue during motor activity"; A., D., Novikov, as "the ability to resist fatigue in one some activity "; R., Mano, in 1996, as "motor skills that allow man to cope with fatigue in long-lasting efforts."

Other specialists highlight the prolonged effort as well as maintaining high intensity. Among them are: N., G., Ozolin, in 1972, who considers it "the ability of the body to work with a relatively long duration and a relatively constant intensity of optimal efficiency"; P., J., L., Thompson, in 1996, defines it greatly, maintaining constant indices of optimal efficacy "; Gh., Carstea, in 2001, calls it "the ability of the human body to put forward relatively long duration and relatively high intensity, thus maintaining the clues" the ability to execute a thing with a given intensity in a given period of time "Drawing attention to the fact that" fatigue is the factor limiting and influencing performance at the same time. "

The development of motor skills and the formation of motor skills should be understood as a unitary process, which is carried out in conjunction with the lessons of the semester, the year and the cycle of education, each of these being assigned the weighting imposed by the current recommendations.

Material and methods

The hypothesis of the thesis, it is assumed that the experimental study on the development of the motor quality means the reality in all manifestations by means specific to athletics, some aspects of the system of applying these exercises in the physical and sports education lessons are elucidated, the groups of pupils in the classes VII and VIII.

We chose this theme because of the special importance of the motor skills in general and of the resistance in particular at this age (13-14 years), because on the one hand, the resistance is a slightly improved motor quality, work on improving it until the age of adolescence and even more, and on the other hand its level of development ensures to a great extent the level and quality of the manifestation of the other motoring qualities, especially speed and force.

The results of the latest research have shown that resistance is a quality accessible to all ages, and its development must be given greater attention, from the earliest age, before the development of other motor skills. At the same time, some resistance tests are selection tests for sports activity. The research methods used were: the bibliographic study method, the observation method, the experimental method, the test method, the method of interpretation and processing of the information.

A sample of 40 subjects aged 13-14 (20 girls and 20 boys) were chosen for the scientific, experimental approach, from the "Iorgu Vârnab Litanu Technological Highschool" in Liteni, Suceava County, where the research was conducted. I mention that the subjects were not the result of a preliminary selection, but they constituted the proper staff of the Seventh Classes. The goal pursued in the physical education and sports lessons was to improve the forms of manifestation of resistance through specific means of athletics. We have mainly pursued the development of the overall driving capacity and its consolidation by integrating in the complex activities the knowledge, skills and skills acquired in the previous years.

Discussions and results :

From the organizational point of view, the lessons provided the necessary framework for the activity, corresponding to the individual and group options of the pupils, the differentiated level of training, the particularities of their sex, their interest and their motivation.

Planning the development of resistance becomes a first-order necessity and in the proposed experiment to achieve an increase in the indices that express the development of the body's resistance, the resistance being the motricity on which it was continuously and directly acted, therefore it became a permanent objective.

Mostly, as a way of acting on the body's resistance to increase it, we used the followings):[4,5,6,9,10,11].

Tabel nb. 1 The specific athletic methods (examples) used in the experiment

1	Long run in uniform tempo, on flat ground	Dosage 2x30 sec. with 1 minute pause between repetitions
2	Long run in uniform tempo, on flat ground	Dosage 2x1 min, with 2 min pause. between repetitions
3	Long run in uniform tempo, on flat ground	Dosage boys 3 min., Girls 2 min.
4	Durable run on varied terrain	Dosage 1x 300m boys, 1x200m girls
5	Durable run on varied terrain	Dosage 1x4 min. boys, 1x3min.girls

6	Running on the hill with small steps	Dosage 4x100m
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The measurement and evaluation system, understood as a stable component of the training process, with a predominantly regulating role, was achieved by means of measurements aimed at the motoric development of the subjects.

Testing the development of motor strength resistance consisted of: running resistance 800m girls, 1000m boys; the Cooper test and cross-country running (1500m).

The main objective of the experimental experiment was to estimate the development of the experimental and control samples in order to have an overview of the motor development, being the basis for the start of the formative experiment, while the experimental experiment aimed at verifying the hypothesis of the scientific approach in practice.

The measurement and interpretation of data being a basic condition for the validity of any research, the following statistical parameters were used: arithmetic methods, standard deviation and coefficient of variability.[7]

Tabel nb.2 Statistical data - experiment group

		Experiment sample								
		Running resistance 800 m girls, 1000 m boys			Cooper Test			Cross Running		
		X	+/-S	Cv%	X	+/-S	Cv%	X	+/-S	Cv%
GIRLS	T.I.	3,55	0,34	0,09	1025	896,05	0,87	5,57	4,82	0,86
	T.F	3,34	0,23	0,07	1975	290,83	0,14	8,76	1,20	0,13
BOYS	T.I.	3,68	0,23	0,06	1470	1015,76	0,69	5,89	4,07	0,69
	T.F	3,41	0,09	0,02	2425	225,15	0,09	7,64	0,56	0,07

In the experimental sample, an improvement can be seen between the initial and the final test on the three samples, both for girls and for boys, as follows: the resistance run is 0.21, in the Cooper 950 m test, and at the run The difference is 3.19. In boys, the difference between the initial and the final test is 0.27 at the resistance run, the Cooper test is 955 m, and the crossing the difference is 1.75.

Tabel nb.3 Statistical data - experiment group

		Control Sample								
		Running resistance 800m girls, 1000m boys			Cooper Test			Cross Running		
		X	+/-S	Cv%	X	+/-S	Cv%	X	+/-S	Cv%
GIRLS	T.I.	3,54	0,30	0,08	1030	900,67	0,87	5,95	5,17	0,86
	T.F	3,66	0,34	0,09	1010	881,22	0,87	5,78	5,05	0,87
	D.	0,12	0,04	0,01	20	19,45	0	0,17	0,12	0,01
BOYS	T.I.	3,59	0,24	0,06	1495	1034,52	0,69	5,94	4,10	0,69
	T.F	3,64	0,28	0,07	1495	1034,52	0,69	5,73	3,98	0,69
	D.	0,05	0,04	0,01	0	0	0	0,21	0,12	0

In the control sample, an improvement between the initial and the final test on the three samples, both for girls and boys, can be seen as follows: the resistance run is 0.12, the Cooper 20 m test, and running cross, the difference is 0.17. In boys, the difference between the initial and the final test is 0.27 at the resistance run, the Cooper test does not show any increase, and at the crossing the difference is 0.21.

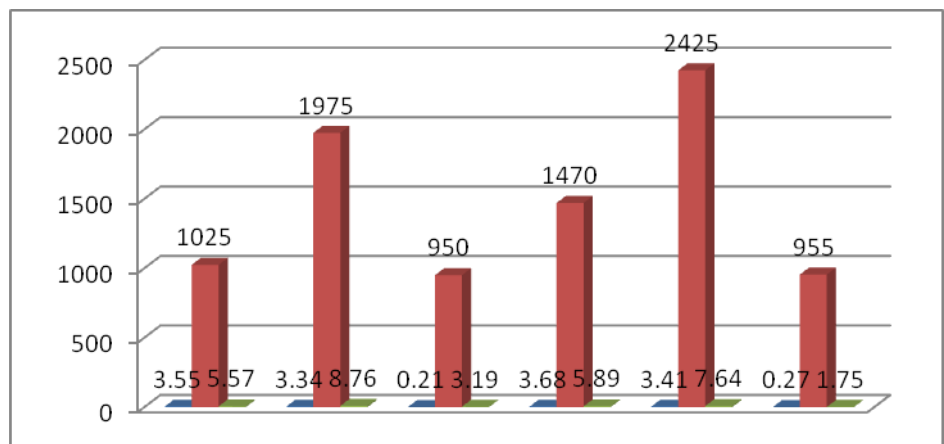


Diagram nb.1 Statistical data - experiment group

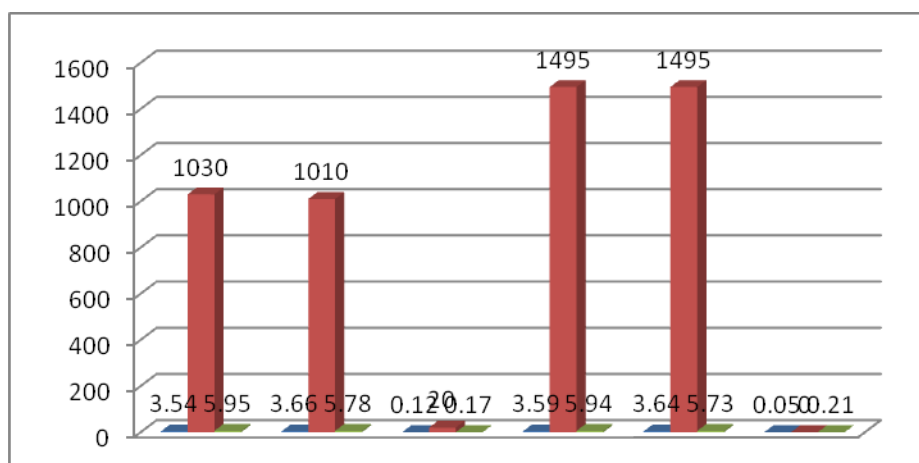


Diagram nb.2 Statistical data - experiment group

Practical conclusions:

- Athletic exercises can be used as a means of developing the forms of resistance manifestation;
- Athletic exercises can form the content of a lesson of physical education and sports that focuses on the development of resistance because they can improve almost all manifestations of it;
- These exercises mainly develop the forms of resistance manifestation.
- The progress achieved was due to the following factors:
 - the work done for the development of resistance was achieved in each physical education lesson throughout the experiment;
 - the use of athletic means known for their effectiveness, verified in practice;
 - achieving a conscious and active participation of all students;
 - using the contest element;
 - achieving a good driving density of lessons.

We believe that the methods used by us in the experiment have placed the teaching styles in a psychosocial field favorable to the training situations in accordance with the age specifics of the subjects.

As a result of the experimental study, the experimental sample versus the control sample showed greater flexibility in adapting to different situations, it allows me to appreciate that the present paper is the result of an attempt to find ways to develop the driving capacity in general, and resistance in particular.

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***DEZVOLTAREA CALITĂȚII MOTRICE REZISTENȚA SUB
TOATE FORMELE EI DE MANIFESTARE PRIN MIJLOACE
SPECIFICE ATLETISMULUI ÎN CICLUL GIMNAZIAL***

Cuvinte cheie: elevi, calitate motrică, mijloace, atletism.

Abstract: Educația fizică alături de celelalte activități motrice fundamentale din domeniu, face parte integrantă din măsurile privind dezvoltarea fizică armonioasă și menținerea unei stări optime de sănătate pentru toate categoriile de populații. În această lucrare am urmărit, în ce măsură tratarea dezvoltării calității motrice rezistență sub toate formele ei de manifestare prin mijloacele specifice atletismului are posibilități de îmbunătățire a capacității motrice individuale în cadrul lecției de educație fizică, la nivelul elevilor din ciclul gimnazial. Am urmărit de asemenea să pun în practică, în cadrul lecțiilor de educație fizică, unele programe de dezvoltare a rezistenței folosind o serie de variante metodice.