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Original article

## DEVELOPMENT OF MOTOR SKILLS THROUGH MOVEMENT GAMES AND CONTESTS TO FIFTH GRADERS

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### Abstract\*

*Aim.* Research is focused on the level of the fifth experiment, aimed at developing motor skills by using a system of means consisting of movement games and contests, content corresponding national curriculum at secondary school.

*Methods.* In this paper we intended to verify whether the application of games and contests during the 10 weeks can improve motor skills parameters middle school pupils in the fifth grade. The experiment was conducted in physical education classes for a period of 10 weeks in Constanta Decebal High School, 12 fifth-grade boys. To see if the movement games and contests used in physical education classes led to an improvement in motor skills fifth graders were conducted two tests: an initial test and a final test.

*Results.* Comparative analysis of motricity parameters of our study subjects between the two tests revealed significant progress from the initial test and final testing of pupils in the fifth grade, the Decebal High School in Constanta.

*Conclusions.* Drive systems applied during the study were appropriate selected and the experiment conducted at the level of the fifth year revealed significant improvements in all parameters tested: running speed - 50m, running resistance - 800m and long jump from standing. We propose that in practice physical education teachers to pay special attention drives used to increase the capacity driving pupils secondary education and physical capacity thereof, thus a achieving the objectives of the national curriculum for physical education and sport.

*Keywords:* motor skills, movement games, contests, fifth graders.

### Introduction

The study of the movement made by humans has always been preoccupied with the philosophers, physicians and psychologists, observing it with very long ago links between motor and intellectual development (Stănescu, 2002).

Over this link is made and in modern psychology. Its prominent representatives insist their works, on the links between physical and intellectual development, on the relationship between the motor nerve and maturity, on the relationship between intelligence and motor activity.

The literature appears always the idea of the relationship between biological development, physical and motor development and mental and psychical in general. Thus, it meets the general opinion that the act engine, its quality is closely linked to consciousness, that produce movement there is an interdependence between biological factors and the psychic that the structure motor is in relation to interconnection, interaction and consubstantiality with all structures of the human

psyche including the intellect, the various disorders neurodynamice of bark adversely affect quality task of analyzing cortical sensory stimulation, thus the quality of motor response and limiting motor adversely affect the organization of mental causing losses of information which, in turn, has implications adverse general intellectual development.

Of the many aspects and manifestations of mental fitness of students in physical education and sports motor behavior study is very important, because the motor side body activities predominate. The reactions of the children are driving and they, like any other mental manifestations, drawn to certain stimulations answers (Epuran, Hoghidan, 1997).

Genetic studies of psychology have a special role in the justification of the concept itself, by emphasizing the role of neverbale activities (body) in the development of cognitive functions (Dragnea, Bota, 2006).

Influence the movement of the child's behaviour as a factor of his temperament,

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establishment of establishing impairment syndromes and leading to behavioral disorders.

After Piaget, thought is given based structure formation and coordination of actions of internalization driving dynamism engine being the starting point in the development of intelligence.

Specialists who have tackled the issue of psihomotricității are unanimously agreed that her understanding is contingent upon the approach of the human being as a unit has two sides: the mental and motor.

Thus, it emphasizes the importance they hold the Organization and coordination of movements, neuropsihică development, the development plan on perceptive-motric, the maturity of the nervous system and the degree of physical development, intellectual development, and the role of the regulator of the word motive in carrying out the action (Păunescu, Mușu, 1997).

Expression of the entire system of personality, psychomotricity is "the result of integrating the interaction of education and maturation synergy and conjugation motor control and mental, not only in terms of movements and acts motive observable, but also what leads them and accompanying them - will, affectivity, needs, impulses" (Lafon, 1963, quoted by Dragu, 2003).

Horghidan (2000) states that the specific psychomotricity resulting from two aspects:

- level that is involved in the regulation of the activity. It is considered that psychomotricity occurs in the moment of intent to execute a certain move, and because this person must know his own possibilities of movement, to form an image of space in which to carry out the action.
- specific structure elements. Although some specialists consider that psychomotricity as a redundancy, precisely because driveability can not be conceived outside voluntary control, however, some distinctions are necessary. Psychomotricity is a conjugation of the psyche and motility, but their intersection is only partial, as illustrated by representations ideomotorii, body scheme, laterality manual motor intelligence, energy balance.

Piaget and Wallon (cited by Dragnea and Bota, 1999) argue that "psyche and motility are not subject to two distinct categories, one thinking and other physical and physiological mechanisms, but

rather are the expression of a single bipolar process, that adapting effective, flexible external conditions."

Dragu (2003) states that a distinction must be made between motor skills and psychomotor sports. The former classical field includes capabilities on strength, endurance, and the second field, perceptual-motor abilities, reaction time to a stimulus simply adapting the motor gesture trajectory of an object.

Bompa (2001) argues that physical training is one of the most important factors and in some cases, the most important ingredient in achieving great performance sports training.

Through physical training we understand the systematic processing of indices morphological, functional and motive to achieve maximum efficiency in practicing a sport branches.

### Methods

The experiment was performed in physical education classes for a period of twelve weeks Decebal High School in Constanta, twelve boys fifth grade.

To see if the motion relays and games used in physical education classes led to an improvement in motor function graders V-a, were performed two tests: an initial test and a final test.

To test the motility following samples were used:

1. Speed on the distance of 50 m with standing start.
2. Long Jump off place: measuring the distance between peaks and the last trace left on the ground (heel). It recorded the best jump of 2 attempts.
3. Resistance on the distance of 800 m.

The population was characterized by values central tendency estimate, so in our research mention mean and standard deviation below the formula  $\bar{x} \pm Ds$  and coefficient of variation that reflects the homogeneity of the group of subjects.

Differences between populations values were obtained by applying T test dependent (correlated) low volume. Differences were considered significant for the following thresholds of significance:  $p < 0.05$ ;  $p < 0.01$ ;  $p < 0.005$ ;  $p < 0.0005$ .

### Results

After applying the two tests, analysis and interpretation of results emerged following tables and graphs.

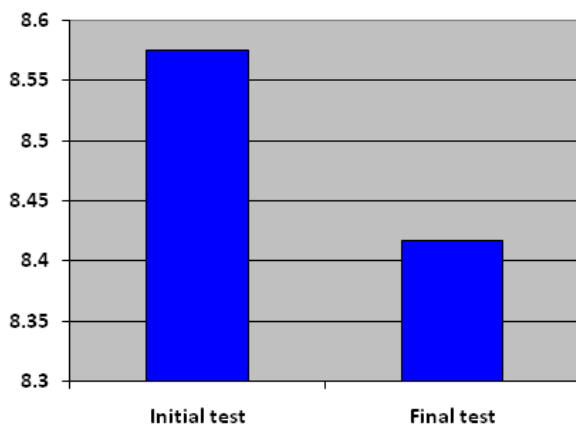
Table 1 - Data obtained from the subjects in the two tests

No.	Speed of 50 m sample		Running resistance - 800m (seconds)		Long jump	
	Initial	Final	Initial	Final	Initial	Final
1.	7.8	7.7	268	258	184	185
2.	8.9	8.7	207	210	141	145
3.	8.4	8.4	248	233	160	167
4.	8.9	8.8	242	237	135	140
5.	8.9	8.5	239	230	140	147
6.	9.2	8.9	232	220	145	150
7.	9.2	9.0	241	229	152	160
8.	8.3	8.1	199	202	167	170
9.	8.0	7.8	240	234	140	146
10.	8.6	8.5	244	232	142	148
11.	8.4	8.3	239	231	163	170
12.	8.3	8.3	206	201	172	175

Table 1. Table of statistical data at the speed of 50 m sample

	Speed of 50 m	
	Initial test	Final test
X	8,575	8,417
DS	0,452	0,409
Cv	5,27%	4,86%
t	4,710	
p	p < 0,0005	

Chart 1. Graphical representation of averages obtained at the speed 50 m



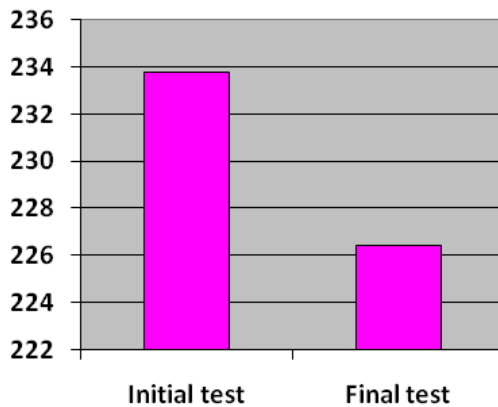
In testing running speed on the distance of 50m in the experimental group was an average performance of 8.417 seconds at final testing to 8.575 seconds initial testing, the value of "t" is the 4,710 which is a statistically significant difference in a significance threshold of  $p < 0.0005$ .

The coefficient of variation indicates a high homogeneity of the group of subjects both at initial testing and final testing.

Table 2. Table of statistical data at the running resistance - 800m sample

	Running resistance - 800 m	
	Initial test	Final test
X	233,75	226,42
DS	19,982	16,054
Cv	8,55%	8,55%
t	4,436	
p	p < 0,005	

Chart 2. Graphical representation of averages obtained at the running resistance - 800m sample



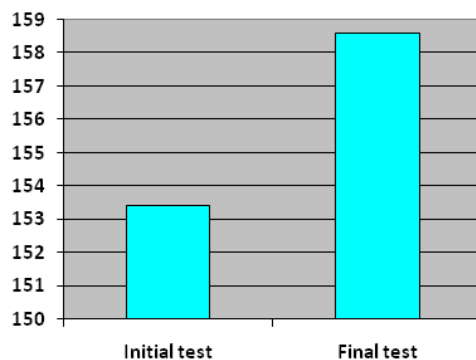
When testing resistance running the 800m distance, looking at the table and chart. 2 note that the experiment group was an average performance of 233.75 seconds and 226.42 seconds from initial testing to final testing, the value of "t" is the 4,436 which is a statistically significant difference in threshold significance of  $p < 0.005$ .

Regarding the coefficient of variation, it was located at values below 10 percent which indicates a high homogeneity.

Table 3. Table of statistical data at the long jump

	Long jump	
	Initial test	Final test
X	153,42	158,58
DS	15,541	14,488
Cv	10,13%	9,14%
t	8,598	
p	$p < 0,0005$	

Chart 3. Graphical representation of averages obtained at the long jump sample



In testing the length of the jump in place, analyzing and chart table. 3 note that the experiment group was an average value jumps to 153.42 cm and 158.58 cm initial testing to final testing, the value of "t" is the 8598 which is a statistically significant difference in threshold significance of  $p < 0.0005$ .

The coefficient of variability indicates an average initial testing homogeneity and a high homogeneity in final testing.

### Discussions

The literature is unanimous in the assertion that physical training concerns and concerns of value indices morpho-functional motor skills. More than, in preparing the athletes, physical training value is determined by the level of driving skill development (Manno, 1996).

Physical preparation is the support for all other components of training, being also the starting point for the whole process of preparation (Predescu, Ghițescu, 2001).

Physical training includes a whole system of measures ensuring a functional capacity high body by the high level of development of motor skills base and the specific optimal values of the indices morpho-functional full possession of exercises used and perfect health.

### Conclusion

Comparative analysis of motor skills parameters of our study subjects between the two trials revealed a significant advance from the initial test their driving final testing of students in the fifth grade, the Decebal High School in Constanta.

Drive systems applied during the study were appropriate selected and the experiment conducted at the level of the fifth year revealed significant improvements in all parameters tested: running speed - 50m, running resistance - 800m and long jump from standstill.

We propose that in practice physical education teachers to pay special attention drives used to enhance the capacity driving students gymnasium and physical capacity thereof, thus a fulfillment of the objectives of the National Curriculum for Physical Education and Sport.

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