

**COMPARATIVE STUDY ON THE DEVELOPMENT OF  
MOTOR SKILLS -SPEED AND SKILL, IN PRIMARY  
CYCLE, BETWEEN RURAL AND URBAN AREA**

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**Keywords: speed, skill, primary cycle, rural, urban.**

**Abstract:**

In this study I have observed the development of motor skills speed and skill. I tried, taking into account the Education Law and the school curriculum, to monitor these two motor skills by applying specific means. The study was made in two classes from primary cycle, namely the 4<sup>th</sup> grade from Lower Secondary School "Irimia Irimescu", Brusturi-Neamt, from rural area and the 4<sup>th</sup> grade from Lower Secondary School no.2, "Grigore Ghica-Vodă", Târgu Neamt, from urban area. Lower Secondary School "Irimia Irimescu" was the experimental group, and Lower Secondary School no.2, "Grigore Ghica-Vodă" was the witness group. As a result of evaluation samples: speed running on 25 meters, commutation 5x5 meters, long jump from the place and an application path, it was made a comparison between the evolution of the two groups.

**Introduction:**

**The Education Law** with its subsequent amendments and additions regulates the organization and functioning of the national system of education (Law no. 84/1995). The ensemble of establishments and educational institutions constitute the national education system. Units and educational institutions are of different types, levels and organization's forms of activity of training and education. These units and educational institutions divide into two categories: state and private. 10 education classes is compulsory, and its attendance, full-time study it stops at the age of 18 years. (Art.15)

The national education system is divided into the following levels:

1. **Pre-primary education**, formed from small group, middle group, high group, the preparatory group for school;
2. **Primary education**, formed from I-IV classes;

3. **Secondary education**, which is divided into:

- **Lower-secondary education**, which contains two cycles that succeed: gymnasium (classes V-VIII) and inferior cycle of high school or school of arts and crafts (classes IX-X);

- **Upper-secondary education**, that includes the superior cycle of high school (classes XI-XII/XIII, preceded if necessary by the year of completion);

4. **Post-secondary education**;

5. **Higher education**- composed of university education and postgraduate.

Primary education works with morning program as full time study within schools with classes I-IV, I-VIII or I-XII (XIII). In primary and secondary school education it develops gradually the formation of practical skills that are included in general technological preparation of students. Students are offered support in the knowledge and use of some working techniques with various tools and materials, are helped in training the design capacity, execution, evaluation, use and capitalization of products, they learn how to make the evaluation of personal resources and it is formed the initiative spirit and entrepreneurship in career planning.

At the age of 10-11 years it appears the students' initiation in sports. Due to the control performed by the central nervous system on the muscle activity, children present a greater receptivity in appropriating the motor skills.

In addition to acquiring various motor skills, it appears the work for developing speed, at 11-12 years children. (C.Florescu, V.Dumitrescu, A.Predescu, 1969, pag. 166)

”The capacity (quality) of human body to perform acts and motric actions, with the entire body or with only some segments of it, in a shorter period of time (with maximum rapidity).” (P.Ghervan, 2014, pag.19)

At beginners and children, the level of physical training is low, so the speed has a general character of the generalization and it is observed a higher degree of correlation between forms of its manifestation. Speed will be assigned a more specific character as increasing training of children.(C.Florescu, V.Dumitrescu, A.Predescu, 1969, pag. 98)

” The capacity (quality) of human body to perform motric acts (actions) coordinating the body or its segments in equilibrium, accuracy, spatial-temporal orientation, amplitude, ambidexterity in order to obtain maximum efficiency (in unusual conditions and with minimal energy consumption). (P.Ghervan, 2014, pag. 20)

**Material-method:**

In this study we want to observe the development of motric qualities - speed and skill at children from IV grade, from rural and urban area. I particularly wanted that the study to be done on the IV class from Lower Secondary School ”Irimia Irimescu”, Brusturi-Neamț, from rural area and the IV class from Lower Secondary School no.2, ”Grigore Ghica-Vodă”, Târgu Neamț, from urban area.

The tests were given in schools gyms, and the used materials were as follows: measuring meter, whistle, chronometer, 8 milestones, 2 medicinal balls and an obstacle.

Students from IV A class from Lower Secondary School ”Irimia Irimescu” were the experimental group, and class IV B from Lower Secondary School no.2, ”Grigore Ghica-Vodă” was the witness group. Subjects were receptive and they had a great interest in relation to the work carried out.

The research was conducted from November 21, 2014 until April 24, 2015.

In this research study we have started from the following assumptions:

1. Students from rural area have a better physical development, even if they are disadvantaged in terms of material conditions.
2. Although students from rural areas are disadvantaged, they have a better motric development than urban students.

Control tests that we will apply are as follows: speed running on 25 m, commutation 5x5m, long jump from the place and an application path.

**SPEED RUNNING – 25m – approximate assessment scale**

GRADE	SUFFICIENTLY		GOOD		VERY GOOD	
	B	G	B	G	B	G

IV	5.8	6.0	5.6	5.8	5.4	5.6
	5.7	5.9	5.5	5.7	5.3	5.5

**COMMUTATION 5x5m - approximate assessment scale**

GRADE	SUFFICIENTLY		GOOD		VERY GOOD	
	B	G	B	G	B	G
IV	6.2	6.6	6.1	6.5	6.0	6.4

**LONG JUMP FROM THE PLACE - approximate assessment scale**

GRADE	SUFFICIENTLY		GOOD		VERY GOOD	
	B	G	B	G	B	G
IV	1.25	1.20	1.30	1.25	1.35	1.30

- Applicative path:**
1. Run through milestones on 8 m;
  2. Walk in balance on the turned bench gym, with two medicinal balls in hands (1kg/ball);
  3. Jump over an obstacle with balls in the hands, landing with placing the ball in a fixed point;
  4. Speed running 20m up to the finish line.

- The used methods:
1. Measurement method;
  2. Tabular method;
  3. Graphical method.

Besides the measures that we have proposed for the research, we also did the anthropometric measures in order to observe the development level of children from rural area, but also of children from urban area.

Table 1 Anthropometric middle-level measures of 10-12 years girls from rural area

Age (years)	Weight (kg)	Height (cm)	Chest perimeter (cm)
10	26,4 ± 3,2	129,6 ± 5,8	62,5 ± 3,2
11	38,7 ± 3,7	133,9 ± 6,0	64,3 ± 3,3
12	31,3 ± 4,4	138,2 ± 6,6	66,1 ± 3,6

Table 2 Anthropometric middle-level measures of 10-12 years boys from rural area

Age (years)	Weight (kg)	Height (cm)	Chest perimeter (cm)
10	25,8 ± 3,6	129,0 ± 6,0	60,7 ± 3,4
11	28,5 ± 4,1	134,1 ± 6,3	62,8 ± 3,7
12	32,0 ± 4,9	139,5 ± 7,1	65,3 ± 4,3

Table 3 Anthropometric measures of students from rural area Lower Secondary School "Irimia Irimescu"

X	Weight	Height	Chest perimeter
	Girls		
	37,937	145,56	60,93
	Boys		
	33,625	143,75	58,25

Table 4 - Anthropometric middle-level measures of 10-12 years girls from urban area

Age (years)	Weight (kg)	Height (cm)	Chest perimeter (cm)
10	28,8 ± 5,0	133,5 ± 6,5	62,1 ± 4,5
11	32,2 ± 6,1	139,1 ± 7,3	64,9 ± 5,2
12	36,1 ± 6,7	145,1 ± 7,4	68,0 ± 5,5

Table 5 Anthropometric middle-level measures of 10-12 years boys from urban area

Age (years)	Weight (kg)	Height (cm)	Chest perimeter (cm)
10	28,9 ± 4,5	133,8 ± 6,1	63,4 ± 3,9
11	31,5 ± 5,0	138,2 ± 6,6	65,3 ± 4,0
12	34,3 ± 5,5	143,1 ± 7,0	67,4 ± 4,3

Table 6 Anthropometric measures of students from urban area  
Lower Secondary School No 2 "Grigore Ghica-Vodă"

X	Weight	Height	Chest perimeter
	Girls		
	37,937	145,56	60,93
	Boys		
	33,625	143,75	58,25

**Results and discussions:**

The experimental group, class IV A, had a community of 27 students, 11 boys and 16 girls, and class IV B, the witness group, had 25 students, 10 boys and 15 girls. I mention that at the experimental group 3 boys were medical exempt. After the applied tests, there were obtained the following results shown in tables 1 and 2 below.

Table 1 Grade IV A: Experimental Group, tests

	Speed running – 25 m (ds)		Commutation 5x5 m (ds)		Long jump from the place (cm)	
	T.I	T.F	T.I	T.F	T.I	T.F
<b>BOYS</b>						
X	48.875	47.5	908.125	906.25	131.5	133.625
S	2.416461	2.267787	3.270539	3.494894	2.878492	2.825269
C.V	4,9441	4,7742	0,3601	0,3856	2,1889	2,1143
<b>GIRLS</b>						
X	50.625	48.5	905.3125	902.8125	131.375	133.75
S	2.918333	2.966479	1.922455	2.104559	2.941088	2.816617
C.V	5,7646	6,1164	0,2123	0,2331	2,2386	2,1058

Table 2 Grade IV B: Witness Group, tests

	Speed running – 25 m (ds)		Commutation 5x5 m (ds)		Long jump from the place (cm)	
	T.I	T.F	T.I	T.F	T.I	T.F

BOYS						
X	49.5	48.5	900.7	898	128.7	130.4
S	2.990726	3.439961	6.447222	6.306963	3.020302	4.060651
C.V	6,0418	7,0927	0,7158	0,7023	2,3467	3,1139
GIRLS						
X	49.13333	48.26667	891	889.8667	128.4	128.9333
S	2.559762	2.65832	11.90438	12.14711	3.268901	2.890049
C.V	5,2098	55,075	1,3360	13,650	2,5458	22,415

As a result of the initial and final test there were picked up the resulted data during the application in the form of marks. Thus we have the following results in tables 3 and 4 below:

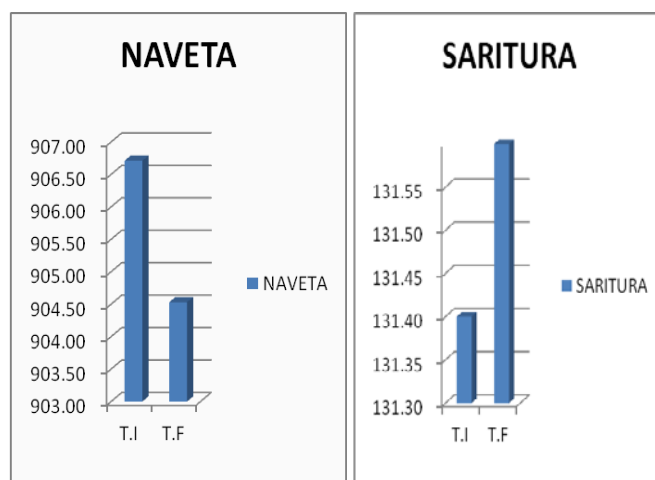
Table 3 Class IV B: Witness Group  
Experimental Group

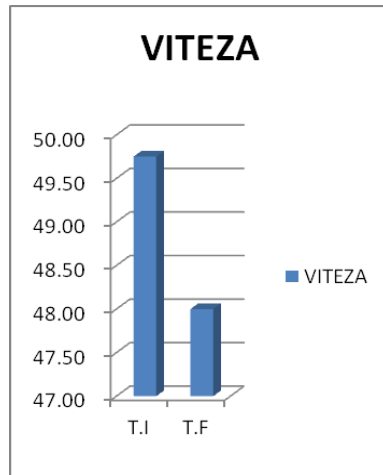
	F.b	B	S	I
T.I	1	14	9	1
T.F	3	14	6	0

Table 4 Class IV A:

	F.b	B	S	I
T.I	10	10	4	0
T.F	13	9	2	0

The experimental group has recorded the following results after the initial and final testing. These are presented in graphic 1), 2) and 3) below:





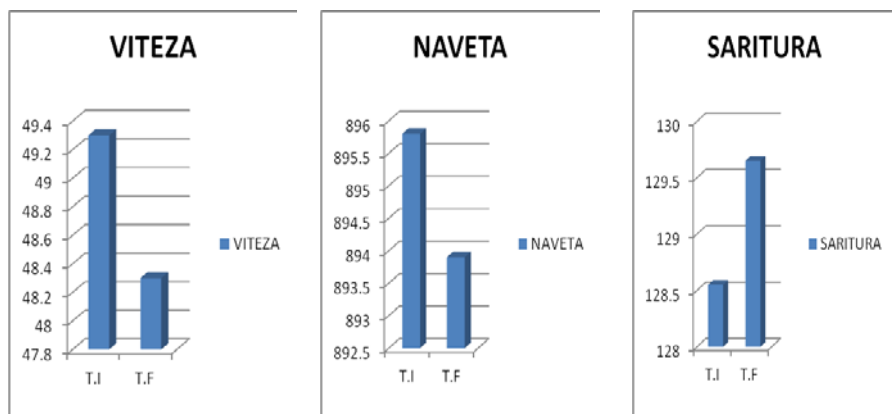
Graphic1:Results at speed on 25 meters  
 Graphic2:Results at commutation 5x5meters  
 Graphic 3:Results at long jump from place

At speed test on 25 meters, the students from experimental group, have progressed with 1,75 sec., at test of commutation 5x5 meters, have progressed with 2,18 sec., and at log jump from the place they have progressed with 0,2 meters.

At the same time the sum and the variability coefficient have progressed. So, the sum has progressed with 0,05sec.

at speed test on 25 meters, 0,27sec. at commutation 5x5 meters and 0,08m. at long jump from the place; the variability coefficient has progressed with 0,09sec. at speed test on 25 meters, 0,01sec. at commutation 5x5 meters and 0,11m at long jump from the place.

Witness group has recorded the following results in the initial and final test that are shown in graphics 4), 5) and 6) below:



Graphic4:Results at speed test on 25 meters  
 Graphic5:Results at commutation 5x5 meters  
 Graphic 6:Results at long jump

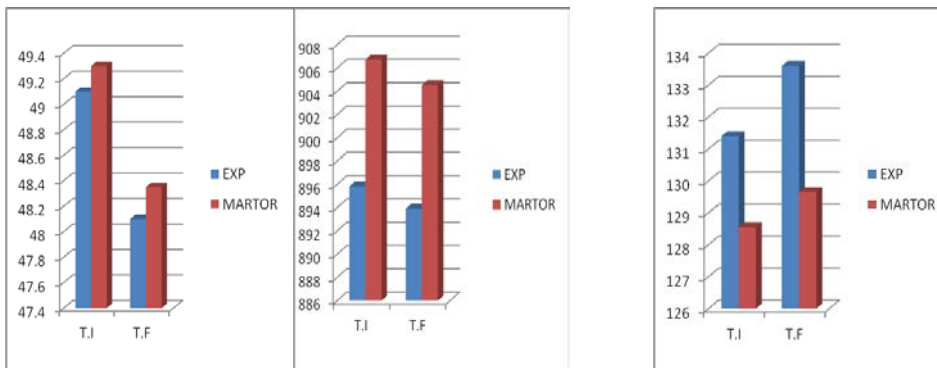
At speed test on 25 meters, the students from the witness group have progressed with 1 sec., at commutation 5x5 meters have progressed with 2,18 sec., and at long jump from place they have progressed with 1,1meters.

Also, the sum and the variability coefficient have progressed. So, the sum has progressed with 0,27sec. at speed test on 25 meters, 0,2sec.



at commutation 5x5 meters and 0,33m. at long jump from the place; the variability coefficient has progressed with 0,7sec. at speed test on 25 meters, 0,02sec. at commutation 5x5 meters and 0,23m at long jump from the place.

As a result of the tests I made a comparison between the two groups for each test. Thus we have the following results presented in the graphics 7), 8) and 9) below:



Graphic7:Results at running test 25meters

Graphic8:Results at commutation 5x5meters

Graphic 9:Results at long jump from place

Experimental group had a visible progress in relation to the witness group. So, at test o speed on 25 meters it has progressed with 0,2sec at both tests, at commutation test 5x5meters it has progressed with 10,9sec at initial test and with 10,6sec at the final test, and at long jump from place it has progressed with 2,9m at initial test and with 4cm at the final test.

**Conclusions:**

1. As the result of the study, it shows that our hypothesis was verified and that students in rural areas have a better physical development even if they are disadvantaged in terms of material conditions.
2. Although students from rural areas are disadvantaged, they have a better motor development than urban students.
3. It is observed that the proposed exercises were effective resulting in an increase in all parameters: the sum, the arithmetic average and the coefficient of variability.

**References:**

1. Legea educatiei;

2. **C. Florescu, V. Dumitrescu, A. Predescu**, (1969)Metodica dezvoltării calităților fizice, Editura SPORT-TURISM, Bucuresti;
3. **Petru Ghervan**, (2014)Teoria Educatiei Fizice si Sportului, Suceava, Editura Universității din Suceava.

**Studiu comparativ privind dezvoltarea calităților motrice viteza și îndemânarea, în ciclul primar, între mediul rural și cel urban**

**Cuvinte cheie:** viteză, îndemânare, ciclul primar, rural, urban.

**Rezumat:**În acest studiu am urmărit dezvoltarea calităților motrice viteza și îndemânarea. Am încercat, ținând cont de Legea învățământului și a programei școlare, să monitorizăm aceste două calități motrice prin aplicarea de mijloace specifice. Studiul a fost făcut pe două clase din ciclul primar și anume clasa a IV-a de la Școala Gimnazială "Irimia Irimescu", Brusturi-Neamț, din mediul rural și clasa a IV-a de la Școala Gimnazială numărul 2, "Grigore Ghica-Vodă", Târgu Neam, din mediul urban. Școala Gimnazială "Irimia Irimescu" a fost grupa experiment, iar Școala Gimnazială numărul 2, "Grigore Ghica-Vodă" a fost grupa martor. În urma aplicării probelor de evaluare: alergare de viteză pe 25 de metri, naveta 5x5 metri, săritura în lungime de pe loc și un parcurs aplicativ, s-a făcut o comparație între evoluțiile celor două grupe.