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**STUDY OF PHYSICAL TRAINING ATTAINED BY BASKETBALL  
SPECIFIC MEANS IN HIGH SCHOOL**

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**Abstract**

Physical training includes a whole system of measures ensuring a high functional capacity of the body by the high level of development of basic motor skills and specific morphological indices optimal values - and a perfect functional health status. The purpose of the study pertains to highlight the effectiveness of exercises and specific means of playing basketball on improving general and specific physical training of students in high school (Alexe, 1993), (Ardelean, 1982), (Colibaba-Evuleț, Bota, 1998), (*Programele școlare*, 2001), (*Ghid Metodologic*, 2001).

As a methodology in addressing physical training in basketball we should highlight a series of operations:

- first operation in addressing physical training is the dominant driving qualities accurate, thus basketball, a domain experts have characterized as the effort being based on specific quality motor resistance manifested under the speed, strength and skill;
- the second operation consists in characterizing specific effort basketball game. This characterization is correlated with the quality of the dominant motive. We note that the effort is characterized through the following parameters: intensity, duration (volume), complexity, metabolic processes of energy release. In basketball specific effort is characterized as: maximal and submaximal, variable intensity and duration, with brief interruptions, very complex and diversified schemes manifestation of motor skills and factors of performance or resistance under speed, flash, technical, tactics and tension, mixed (aerobic anaerobic points) (Demeter, 1981), (Dragnea, 1991);
- the third operation is to establish the dynamics of the training effort (i.e. increases and decreases in effort) that is how it is planned and programmed physical training.

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**Keywords:** Basket-ball; specific means; physical education lesson; physical training; high school.



## 1. Introduction

Physical training aims hypertrophy driving components required for practicing basketball game, respectively motor strength, speed, skill, strength, flexibility etc. In the physical training is based on the premise that - although in different proportions - all qualities drivers are developed and educated. It aims at achieving higher availabilities for each motor quality performance and driving qualities added (Alexe, 1993), (Negulescu, 2002), (Moanta, Ghițescu, & Ghițescu, 2008). The upper level of expression of a driving qualities compensates, to some extent, deficiencies in developing and educating other driving qualities. It was stated, however, that with increasing mastery sporting ability motor mutual substitution tends to collapse.

Basketball, on the other hand, calls for short, intense periods of activity, so that players spend a lot of energy in a short time. Anaerobic pathways are other aspects of cardiorespiratory good form. They provide energy for high intensity activities, such as anaerobic energy systems have also developed well (Alexe, 1993), (Negulescu, 2002), (Moanta, Ghițescu, & Ghițescu, 2008).

The purpose of the study pertains to highlight the effectiveness of exercises and specific means of playing basketball on improving general and specific physical training of students in high school. It has also pursued if used increase efficiency lessons and exercises that increase overall physical qualities of students manifesting within the game of basketball.

## 2. Content, Methodology

General physical training and multilateral: process-oriented development and education to develop motor skills and physical exercises done by selective processing and overall body segments, the major functions of the body and motor qualities (Alexe, 1993), (Negulescu, 2002), (Moanta, Ghițescu, & Ghițescu, 2008). Specific physical training: selective processing process of major functions and motor skills consistent with the characteristics specific effort basketball game, the requisite performance.

As methodology in addressing physical training in basketball should highlight a series of operations:

- first operation in addressing physical training is the dominant driving qualities accurate. Thus Basketball, domain experts have characterized the effort as being based on specific quality motor resistance manifested under the speed, strength and skill;

- the second operation consists in characterizing specific effort basketball game. This characterization is correlated with the quality of the dominant motive. We note that the effort is characterized through the following parameters: intensity, duration (volume), complexity, metabolic processes of energy release. In basketball specific effort it is characterized as: maximal and submaximal, variable intensity and duration, with brief interruptions, very complex and diversified schemes manifestation of motor skills and factors of performance or resistance under speed, flash, technical, tactics and tension, mixed (aerobic anaerobic points);

- the third operation is to establish the dynamics of the training effort (ie increases and decreases in effort)) that is how it is planned and programmed physical training.

For team's performance, succession and business objectives in training physical training is recommended to be as follows:

- ensuring the proper development fund functional, especially cardio-vascular and respiratory systems or specific adaptation to maximum effort bodies and appliances. This is accomplished by general physical training exercises and multifaceted, focusing on strength and overall physical development;
- training to maximizing performance separately for each motor as dominant without putting emphasis on quality driving resistance regime in question;
- integration of specific motor skills separately: skill (technical)-speed; Speed-Skill (technique); force-speed-technical etc.; a development of resistance in specific regimes driving qualities. Basically, there should be much effort in intensity regimen;
- developing specific strength (strength in game mode) and volume of effort under the intensity and complexity.

It ends with providing the necessary specific resistance Round Robin competitions, namely those consisting of 5-6 games played over the course of 8-10 days.

It is understood that between the steps presented in the sequence above cannot, nor is it indicated to draw a strict line between them and there are areas of interference. This must be interpreted as interference succeeding stage start before the end of the previous and the previous stage can continue after starting work to achieve specific next stage(Alexe, 1993), (Negulescu, 2002), (Moanta, Ghițescu, & Ghițescu, 2008).

### 3. Research Methods

There were used the following methods:

1. Method literature study which consisted of gathering information and documentation necessary to substantiate theoretical work.
2. Method teaching observation - is to follow and accurate recording of events intended subjects. In the present study it has been active observation and focused on pupils in the ninth.
3. The experimental method that was applied to study a subject class of the unit design of the game of basketball with the accent on the use of specific influencing and driving the development of The efficiency was checked them.
4. The method of measurements and tests. It was the application of evidence to confirm or refute the hypothesis about the influence of physical training content basketball game on the development of physical qualities of students in high school.

I applied two tests based on general physical development curriculum included in the National System for Evaluation and Examination (S.N.E.E), and two tests on samples basketball specific training considered relevant to our study:

1. Running "shuttle" 10 x 5 m
2. Running speed 50m
3. Detention vertical or "vertical jump"
4. Little marathon with the ball
5. Statistical and mathematical method

Subjects included in the research:

To carry out the study on physical training content in the game of basketball and its contribution to the development of general and specific ax to students in high school, was organized research at Tudor Vladimirescu High School in Bucharest between November 2014 and May 2015.

The experiment was conducted on a group of 20 students of class IX, n = 10 n = 10 boys and girls. The study was made up of students who attend classes and have been able to exercise.

Testing was applied at the beginning - initial testing (in November) and at end of study (May), final testing.

Planning issues in play basketball and motor skills are divided into cycles of lessons on the two semesters. The topics addressed were the specific motor skills and athleticism to play sports, or motor skills specific branches of sports and motor quality.

Specific means basketball game used for physical training of students in high school:

During the study were used means of well-chosen game of basketball and of physical attributes, which were distributed in lessons during the two semesters in compliance with the methodological requirements:

- exercises to be measurable;
- have a maximum efficiency and minimum effort;
- to be located on developing combined motric qualities: joint mobility, strength - speed driving qualities required to play with gradually increasing intensity;
- using those simple exercises with the complexity accessible to students at this age, allowing the speed of execution;
- establish accurately the number of repetitions with rest intervals and duration to enable proper restoration of key physiological indicators.

#### **4. Findings**

Results obtained in initial and final testing, statistical interpretation and analysis of experimental results. Following the measurements motive applied to the female students and students of class VII we have obtained some data that we have evaluated according to certain criteria, assess the level at which lies the subjects investigated and to what extent exercises used were motility had on their efficiency.

Analyzing data obtained by calculating averages for both initial testing and final as it can be seen an improvement in results in all samples applied to both girls and boys, thus confirming the hypothesis.

To better assess the effectiveness of physical training content in the game of basketball, we do an analysis on each sample, compared to boys - girls.

**Table 1.** Media performance during the motor tryouts by a group of boys in initial testing (TI) and final test (TF)

No ctr.	Initials	Lap 5x10m		AV50m		Vertical jump & cm		Little marathon		Two hand chest pass	
		TI	TF	TI	TF	TI	TF	TI	TF	TI	TF
1.	M.A.	15,62	13,50	7,14	6,99	25	33	34,09	32,00	20	27
2.	D.A.	14,20	12,41	7,33	7,19	31	36	36,49	28,22	19	24
3.	A.Ş.	15,72	13,05	7,96	7,41	28	29	34,47	27,18	22	27
4.	A.A.	15,08	13,01	7,08	6,37	31	37	32,12	28,46	22	27
5.	D.L.	14,06	14,45	7,96	7,62	25	30	40,00	35,08	25	29
6.	D.C.	14,45	14,42	7,43	7,28	28	33	29,40	26,48	23	28
7.	N.AI.	13,46	12,54	7,38	7,07	25	33	29,40	26,16	22	31
8.	G.A.	13,38	13,05	7,98	7,61	26	34	32,38	28,24	19	26
9.	M.C.	14,43	13,28	7,20	6,89	25	30	35,52	29,56	20	25
10.	P.A.	13,69	13,13	7,94	7,48	28	32	36,00	31,10	21	24
	X	14,40	13,28	7,54	7,19	27,20	32,70	33,98	29,24	21,29	26,79
	S	0,83	0,68	0,37	0,38	2,39	2,58	3,28	2,77	1,88	2,20
	CV%	5,79	5,15	4,99	5,32	8,80	7,90	9,67	9,48	8,86	8,21
	Dif.	1,12		0,35		5,50		4,74		5,50	

**Table 2.** Media performance during the motor tryouts by a group of girls in initial testing (TI) and final test (TF)

No ctr	Initials	Lap		AV50m		Vertical jump		Little marathon		Two hand chest pass	
		TI	TF	TI	TF	TI	TF	TI	TF	TI	TF
1.	D.A.	17,42	15,56	8,12	7,67	22	26	35,09	32,92	17	20
2.	B.A.	14,90	13,48	7,91	7,43	26	28	32,49	30,02	18	21
3.	B.C.	17,31	15,10	7,67	7,35	23	28	36,47	32,16	16	19
4.	B.R.	16,00	14,89	7,54	7,15	26	27	33,12	30,46	16	19
5.	E.T.	14,53	14,10	8,13	7,82	22	28	42,12	40,09	18	20
6.	C.A.	15,16	14,26	7,85	7,30	21	27	32,45	30,86	21	23
7.	D.Ş.	14,03	13,87	8,28	7,96	22	30	35,40	30,38	17	19
8.	F.A.	16,90	13,85	7,27	7,05	22	25	38,38	35,04	14	17
9.	G.M.	15,82	13,80	7,47	7,19	19	24	35,52	31,16	18	20
10.	M.R.	15,65	13,62	7,71	7,20	17	22	33,27	31,59	21	23
	X	15,77	14,25	7,79	7,41	22	26,5	35,43	32,46	17,60	20,10
	S	1,16	0,69	0,32	0,30	2,74	2,32	3,02	3,06	2,17	1,85
	CV%	7,36	4,88	4,14	4,13	12,49	8,75	8,52	9,43	12,33	9,21
	Dif.	1,52		0,38		4,50		2,97		2,50	

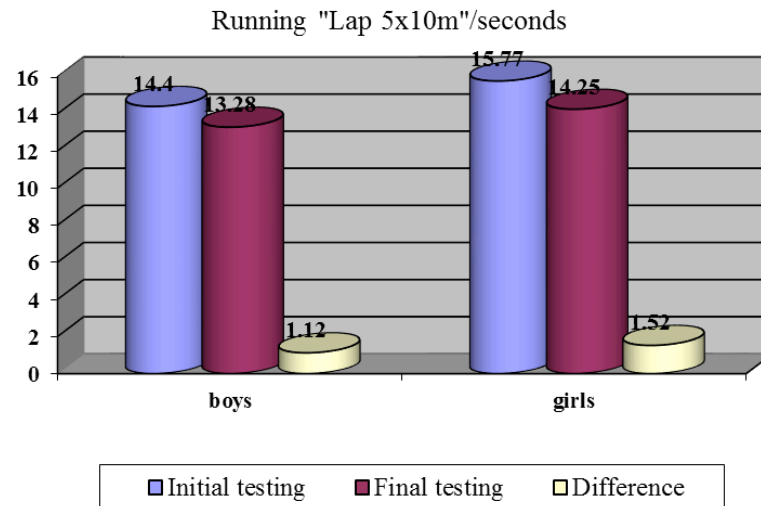


Fig. 1. Running sample averages 5x10m shuttle, / boys / girls in the two tests.

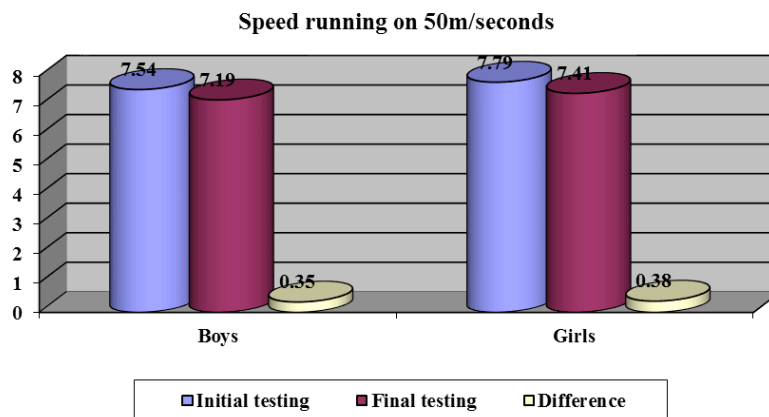


Fig. 2. Running sample averages of speed 50 m / boys / girls in the two tests.

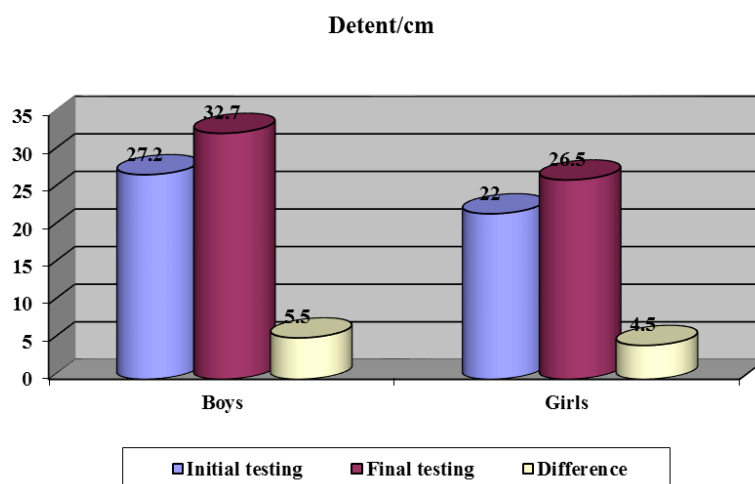
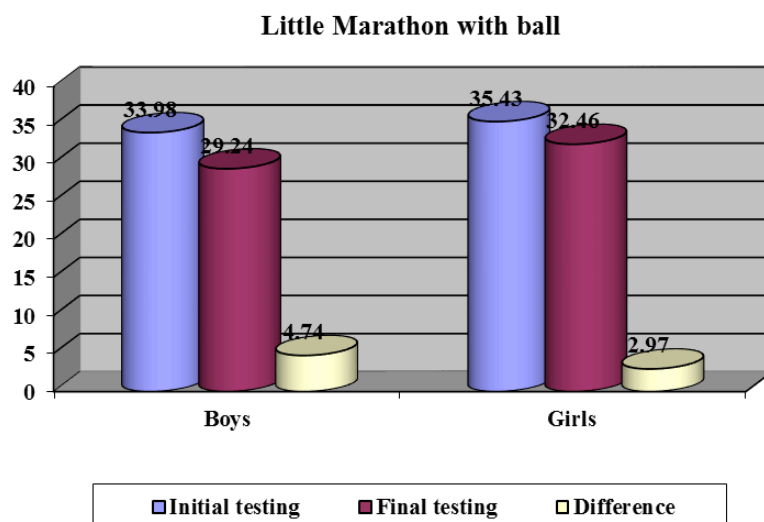


Fig. 3. Averages trial detent / boys / girls in the two tests.



**Fig. 4.** Little Marathon Ball sample averages / boys / girls in the two tests.

## 5. Conclusions

Motor skills development is possible throughout the school work through a careful design and use of exercises, exercises structures, scaling proper physical training content basketball game throughout the school year.

This is evidenced by the results at the end of the study, when there were increases in environments in all five samples applied with a rate higher in boys as in girls.

The differences are significant accepted the idea that physical training is beneficial application content to play basketball in physical education lessons with students in the gymnasium.

### 2.4 Conclusions

Following the results of graders under investigation allow me to recommend the use of means of basketball for ensuring physical training higher the increase in the manifestation of motor skills combined: execution speed - precision - mobility - strength - endurance, etc. as they can add enhancements.

The methods and means used during the two semesters were chosen in the first period of training exercises based games precise operational objectives well established, aiming to obtain the final performance of curriculum formulated:

- conduct dynamic lessons with exercises and using its capabilities basketball game, well standardized and dosed, so that they can be agreed both boys and girls.
- providing the ideal base material (student and ball), sports equipment with a large number of helpful devices.
- increasing the share of sports games and basketball so at all educational levels, given the role that they play in leisure.

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