

# THE STUDY REGARDING THE MOTOR PERFORMANCE IMPROVEMENT OF THE HIGH SCHOOL STUDENTS BY APPLING THE MEANS CHARACTERISTIC TO VOLLEYBALL GAME IN PHYSICAL EDUCATION LESSON

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**Abstract.** *The volleyball game, along with other sports games represent an important way of the school physical education with significant responsibilities in the training and education process of the young generations. By its means volleyball significantly influences both the physical and motor skills, and habits training necessary for its practicing with the recreational goal. With a strong dynamic, educational and formative character, it is found in physical education lessons at all levels, but particularly in high school.*

**Keywords:** *high school students, physical education lesson, volleyball game, motor abilities, motor skills, pass, pickup, serving, attack hit.*

## Introduction

The importance of physical education in order to ensure the optimal health of adolescents is indisputable in a society comprised of hypo-dynamics, indifference and absenteeism. Today, the high school student has only a one hour of physical education which it causes the teacher to a permanent activity, creative of searching, finding and using new methods, processes and means in order to act in practice.

The teaching process of physical education in high school is a process under the general objectives of education, the structure and its content, aiming both the physical sphere and the cognitive one.

This one requires a rethinking and restructuring of the teaching-learning process in order to achieve the curriculum content and to accomplish the curricular skills.

It is accepted by a lot of specialists [1, 3, 6, 7] the idea that through a technology correctly applied it can be achieved the objectives of general education, where physical education has an essential contribution to the development and im-

provement of the young in the motor plan, the stimulation of the intellectual activity, the somatically-functional development as a result of practicing physical exercise

The sports Games represent the main content of school physical education, which are based on the support of students, their importance being valid for all sports training and education process of students from school education.

More and more experts of the domain give a great importance to the role and contribution of sports games, their means, for the training and strengthening of a large volume of motor skills, educating and improving the physical qualities, of the adolescents, the training of some abilities and attitudinal values, requested by the society being in a dynamic change [2, 4, 7].

For the volleyball game the current curriculum establishes a minimum set of knowledge, basic technical-tactical actions of the game and ability formation necessary for effectively learning, mastering and applying of actions in the bilateral game and respecting the main rules.

The formulated minimum requirements allow the achievement of curriculum content in minimum material basic conditions, but according to the teachers and students options, it can be expanded.

Due to the rules, equipments, volleyball playground and even the game actions, these ones allow the fast acquisition of the game model content even from the beginning of the training.

During the physical education lessons from high school, the learning and strengthening of

technical skills specific to the volleyball game, require a great knowledge of the methodical way of learning the technical methods and the movement component parts, the motor skills required by their execution, the education ways, the choosing of methods and means synthesizing which they actually operate for achieving the curricular objectives and not least the recognition and improvement of the main mistakes that can affect the efficient executions.

The methodical way of technical skills learning can be selected and staggered in several stages or moments to facilitate the priorities establishment, the election of means and forms of instruction.

To achieve these objectives it is necessary a "precise knowledge of the achieved performance results and permanent seeking of the less expensive solutions for the student" [5, p. 16].

After the careful and coherent achievement of the sequence of exercises overall, arranged in a logical order of learning based on the elements and basic technical processes of the volleyball game, the next goal is to turn every exercise in a measurable performance (for example, the overhead pass with both hands, ten times or in thirty seconds without dropping down the ball, it is a measurable performance).

This paper is a study that started from the **assumption** that adapting the contents of sports volleyball game to the aptitudinal opportunities and desires of students from high schools, their application in physical education lessons will increase the level of general and specific physical training and improvement of practitioner students technical level. Entering the game of volleyball in the physical education process will ensure also an improvement of the basic content of school physical education lessons.

**The goal of research:** is to improve the capacities and motor skills of the students from high school education by teaching / learning the volleyball game in physical education lessons.

## **2. The organizing of the experiment: Subjects, methods and applied samples:**

In order to assess the effectiveness of the means application in the volleyball game within the physical education lessons and assessing their degree of influence on general motricity, it was realized a pedagogical experiment, on a sample of 36 boys, 18 subjects in the experimental group and 18 in bystander group, from the 11<sup>th</sup> forms of the National College "Constantin Carabella".

In order to highlight the means, it were used the data registering method, the statistical-mathematical method of data processing, tabular and graphical method.

*It were applied five motor samples:* the service in the zone number 5; the service in the zone number 1; the attack hit; the down pass with both hands (pickup); the overhead pass with both hands (the number of successful executions in 30seconds).

The samples were applied at the beginning and end of the experiment.

### *Experimental Intervention:*

In achieving the pedagogical model for the experimental group, it was intended the semesters learning units staggering, the volume (the number of hours allocated according to the class profile) in accordance with program requirements, particularities of age, sex, motor training, the preparation being carried out in the lessons of physical education with one and two themes (motor quality, sports game), the time of game is longer than 25-30 minutes. Thus, in our research we realized the proper working program, which included the unit of learning of the technical processes in volleyball game related to the development of motor skills required by the game. The importance of the model proposed by us consists in introducing new exercises structures, specific means with technical content of the volleyball game with the idea of the content improvement, teaching strategy and technology of lesson lead-

ing, improving and enhancing the general motor skills of the high school students.

### 3. The results of experiment:

The results of pedagogical experiment carried out in order to assess the results, achieved for specific technical samples specific in the volleyball game of the surveyed students are statistically processed and presented in the Chart 1 and 2.

After the comparative analysis of the initial

results of the level of learning the technical elements specific to the volleyball game of the surveyed students from experimental group and control group (boys), it can be noticed a difference of statistics indices in all the samples within the initial testing, the progresses being insignificant, which demonstrate that at the beginning of the experiment the groups were homogeneous in terms of mastering the technical procedures.

**Chart 1. The evaluation of specific tests of the subjects included in the experiment / boys**

Group	Statistics indices	The service in the zone 5/ nr. of successes		The service in the zone 1/ nr. of successes		Attack hit/ nr. of successes		The down pass with both hands / nr. of executions 30 seconds		The overhead pass with both hands / nr. of executions 30 seconds	
		T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Experiment (n=18)	$\bar{X}$	6,66	7,36	6,5	7,12	7,63	8,26	16,61	18,60	20,83	23,11
	$\pm m$	0,19	0,16	0,17	0,15	0,18	0,16	0,54	0,51	0,66	0,19
	$\sigma$	0,84	0,61	0,61	0,83	0,7	0,7	2,32	2,17	0,61	0,83
	Cv	12,6	8,62	9,51	11,7	9,46	8,65	13,09	11,76	2,74	3,6
	„t”; P	3,88; P<0,01		3,71; P<0,01		3,70; P<0,01		3,75; P<0,01		3,51; P<0,01	
Bystander (n=18)	$\bar{X}$	6,53	6,87	6,31	6,64	7,50	7,76	16,38	17,02	20,42	21,26
	$\pm m$	0,20	0,18	0,18	0,18	0,19	0,17	0,62	0,54	0,65	0,64
	$\sigma$	0,96	0,95	0,61	0,8	0,53	0,68	2,65	2,38	0,83	0,95
	Cv	15,76	15,26	10,02	12,99	7,76	9,35	16,23	14,38	3,76	4,3
	„t”; P	1,79; P>0,05		1,83; P>0,05		1,44; P>0,05		1,16; P>0,05		1,30; P>0,05	

If at the beginning of the experiment there were not registered good results at initial testing, then along the way, by applying specific means to volleyball game, the subjects have improved their general motor ability, which caused the achievement of some executions of technical processes more efficient during the bilateral games.

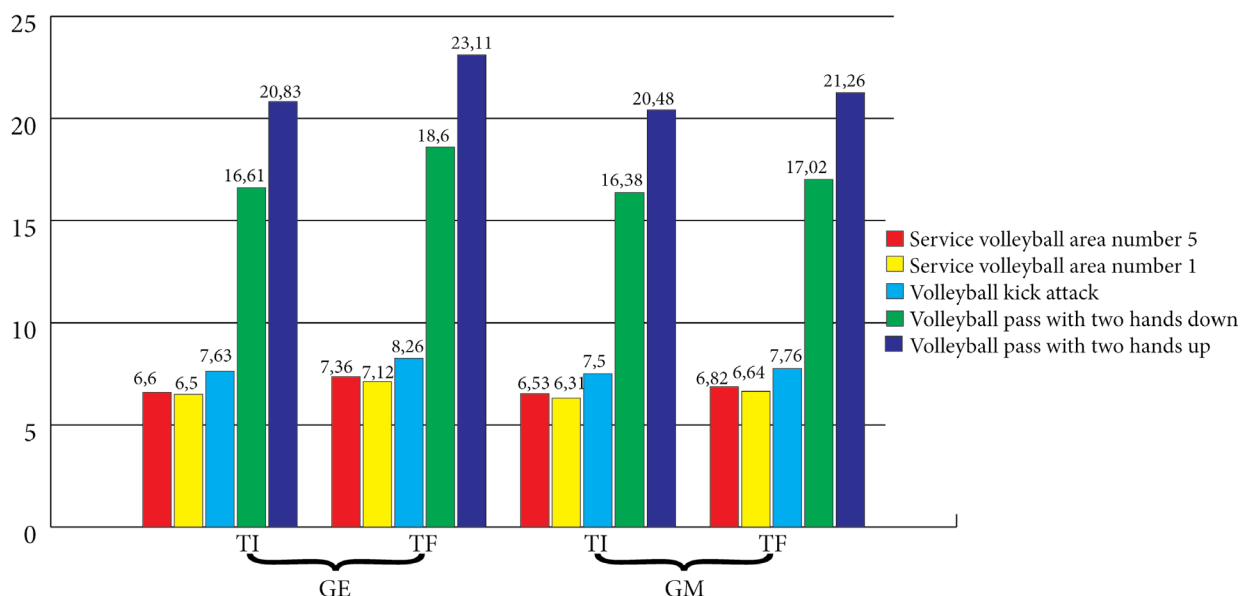
Thus, we can see that there is not any constant among the students in acquiring the five technical processes. At the subjects from the experimental group (boys) it is noticed a better preparation at the service in zone 5, the overhead pass with both hands and pickup (the down pass with both hands) and lower preparation at the service in the zone 1 and attack hit, however we can see a remarkable evolution in all the technical components in the second testing, which demonstrates that the applied method was the best.

The number of successes is higher at the end

of the experiment in all five samples. Thus, in the case of the down pass with both hands (pickup), the registered differences by students in the experimental group show us a successful progress of 1.99 successes versus 0.64 for the control group. But, in the control sample „the overhead pass with both hands” it were registered significant differences in favor of the experimental group with 2.28 more successes versus the bystander group that achieves more statistical increases (0.84 more successes).

Analyzing the dynamics of the results between the experimental and control group in the final testing, it is noticed the higher differences of GE versus GM, statistically the representative differences with values of the „t”, P<0,05 criterion, therefore significant increases, which shows a good assimilation of exercises, a increase of strength and also a better precision.

Fig. 1. The chart of the achieved values by the subjects in the technical samples, GE and GM



### Conclusions:

In conclusion it can be asserted that, the results achieved in the control samples, regarding the technical training of the students from the experimental group are better than those achieved by the bystander group.

It means that, the subjects of the experimental class were positively influenced by the means specific to volleyball game, which were used in physical education classes and on their basis the technical execution was improved. We can say that the rigorous planning, standardization and optimal dosing of exercises and motor structures for achieving the volleyball tasks, have ensured a

high efficiency of the physical education lessons, thus confirming the hypothesis initially formulated in the experiment.

A diversified approach of the curriculum, respecting the basic, material requirements, Framework Plan (the reduced number of hours) classes profile, students option, content reorientation and lessons methodology, can decrease the regular deficiencies and would allow the maintenance to an optimal level of the previous accumulations for a longer term, but also the improvement of the teenagers motor training level, by encouraging their progress.

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