

**THE EFFECTIVENESS OF GAME BASED EXERCISES IN THE  
APPROPRIATION OF PREPARATORY TRAINING FOR JUMPING –  
SECONDARY SCHOOL LEVEL**

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**Abstract:**

Considering games as a means of social adaptation we can understand humans' innate need for social interaction. Games are very efficient in forming one's individual's motor and mental skills as well as in the practice of motor capabilities, i.e. knowing one's physical limits. Children express a multitude of emotions through the games they play. These experiences will help them enrich their general knowledge about their social medium, will help them understand certain complex situations in their lives and will teach them how to dose their physical and spiritual strength. Games stimulate children toward wanting to succeed. By following the rules of the game, they develop their sense of fair-play and use their ingenuity to solve various problems. Games have evolved from simple to complex because a child's growth goes through a similar process of diversification of perceptions. The efficiency of various forms of games can be seen from the preschool age when the child learns to socialize through the games, he plays with other children having the opportunity to create a form of social life on the playground. The culmination of this activity comes when the child reaches an age when he has gathered enough life experience to understand the reason behind the rules. In most cases, the leader exercises his function, before the activity begins, by organizing and selecting the teammates.

**Introduction**

It is not only young children that enjoy practicing games. Older children and adults as well take pleasure in games because they are given a chance to connect with one another, to relax, to compete with others and that gives them great joy as competition is not all about winning, it is about feeling good about oneself.

Movement games are important in the multilateral development of pupils. They maintain and strengthen health and they give a general good state of mind that is why they are considered “means of physical education” [1].

During school years, physical exercises take the form of games at all levels: kindergarten, primary, lower and upper secondary school, university. Choosing which game to use and the way to teach is different in the pedagogical process of a teacher, depending on the children's age, gender, and degree of physical development. In lower secondary school years, the presence of the exercises in the form of games is influenced by the topics of the lesson and their contribution to realizing the lesson's objectives. The correct way to select the appropriate game for a lesson depends on the teacher's pedagogical skills and his/her experience and knowledge of various games. The teacher has the mission to make the students accept and perform the tasks without hesitation, irrespective of age, gender or grade [2].

Movement games can be themselves the subject of the lesson when their difficulty is increased, like the case of the games that are part of the pupils' preparation for school sports competitions. For example, relay races, especially those that involve an obstacle course or elements that train resilience [4,5].

Movement games are part of all moments in a lesson plan except the third moment when the motor system is stimulated. In the first moment of the lesson the teacher draws attention with a movement game that can also be used to prepare the pupils' body for further effort, activating their bodies' functions. These games can also be used to consolidate and apply, in order to develop the motor skills, and the pupils' execution speed and general dexterity. We can have a physical education lesson that relies solely on games in primary school and in 5<sup>th</sup> and 6<sup>th</sup> grades. With these groups of pupils, the aims of the lessons can be achieved by the diversity of the games used. As a conclusion, movement games can be used in all moments of a physical education lesson. Choosing and organizing these games require a correlation between the objectives and the aim of the moment lesson in which they are used [8,9].

Games can be used as exercises to prepare us for certain activities in our lives, an exercise in self-control, though others use them to exercise their penchant for domination, to be better than the others, or as means to counteract the to explain the purpose for which we practice sports and less about what a game is and what it does mean for its players [6,7].

Theories formulated by various researchers explain the game in relation to the interests of class, relating to man's social and professional way of life, to the education and psychological education of the pupil's personality.

The game contributes to a great degree in engaging children in a multilateral communication generated by the chosen topic and the role of the participants. Children assimilate knowledge about professions, activities, deportment through the games they play. We can say that games are a school of

live that stimulate our capacity to live, a complex activity during which we reflect upon the world and our society at a smaller scale.

Russian psychologist D. B. Elkonin [3] considers games as “a form of activity that is accessible to children, that best corresponds to the children’s psychological and physical possibilities”. A.N. Leontiev defines games as a conscious, biological, psychological and societal activity based on knowledge and the need to assimilate information, a need that is primordial in humans. Henry Wallon, “the psychologist of childhood,” considers games as a pleasant and fun investigation in which the child’s awareness develops the most.

### **Material method**

The introduction of games and game-like exercises in physical education lessons increases the pupils’ interest in the subject of the lesson and their state of emulation. Using games also leads to better results in final testing as we will show at the end of this experiment and will prove their efficiency in preparing for certain sports competitions.

During lessons, the aim of the game is the fulfilment of various tasks and its use as means to consolidate the motor skills required in the syllabus for each grade.

To learn how to perform well in jumps examination, the children must first learn how to carry out these exercises correctly using preparatory drills. This examination is part of the lower secondary school syllabus and the preparation for it can constitute means for pupils to acquire the motor skills necessary to have good results at the end.

In this study I used the only 6<sup>th</sup> grade at the No. 1 Romanesti Gymnasial School, Botosani County. The group consists of 23 pupils, 12 of them being girls. I chose this group because the children are at an age when the efficacy of games is the greatest. They are also very much interested in sports activities, more than younger or older students at the same school.

The period used for research spans from September 2019 to March 2020. All lessons, preliminary and final, took place on the school’s outdoor sports field and in an improvised gym on the school grounds. The didactic materials are the same as found in most schools our size. As an exception, we have a few ladders, cones, circles that were used for the lessons.

### **Results and discussions**

The pupils responded very well to the types of exercises used for this research even though these drills are rarely used in lower secondary school. The element of novelty and a dose of fun had made the activities pleasant for everyone.

The research has provided the following results:

Girls:

- In the *50 meters dash* testing, the average improved from 9.108 to 8.792 seconds. The standard deviation decreased from 0.464 to 0.339 and the coefficient of variety decreased from 2.019 to 1.474, which demonstrates an increase in homogeneity (figure 1).

- In the *long jump without momentum* testing, the average improved from 1.438 to 1.453 meters. The standard deviation decreased from 0.096 to 0.045 and the coefficient of variety decreased from 0.415 to 0.194, which demonstrates a growth.

- In the *long jump with momentum* testing, the average improved from 2.440 to 2.503 meters. The standard deviation decreased from 0.464 to 0.339 and the coefficient of variety decreased from 0.097 to 0.070, which demonstrates an increase in homogeneity.

- In the *high jump* testing, the average improved from 0.527 to 0.604 meters. The standard deviation decreased from 0.049 to 0.046 and the coefficient of variety decreased from 0.212 to 0.199, which also demonstrates an increase in homogeneity (figure 2).

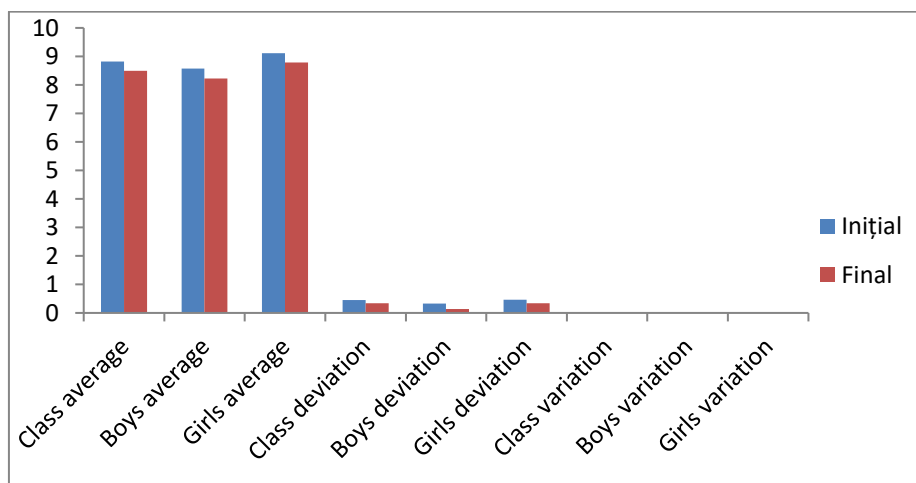


Fig. 1. The 50 meters sprint results analysis

Boys:

- In the *50 meters* testing, the average improved from 8.573 to 8.227 seconds. The standard deviation decreased from 0.328 to 0.135 and the coefficient of variety decreased from 1.426 to 0.586, which demonstrates a homogenous growth (figure 1).

- In the *long jump without momentum* testing, the average improved from 1.526 to 1.609 meters. The standard deviation decreased from 0.046 to 0.035 and

the coefficient of variety decreased from 0.200 to 0.152, which demonstrates an increase in homogeneity.

- In the *long jump with momentum* testing, the average improved from 2.496 to 2.598 meters. The standard deviation decreased from 0.070 to 0.031 and the coefficient of variety decreased from 0.305 to 0.134, which demonstrates a growth.

- In the *high jump* testing, the average improved from 0.559 to 0.685 meters. The standard deviation decreased from 0.049 to 0.016 and the coefficient of variety decreased from 0.213 to 0.071, which demonstrates an increase in homogeneity as well (figure 2).

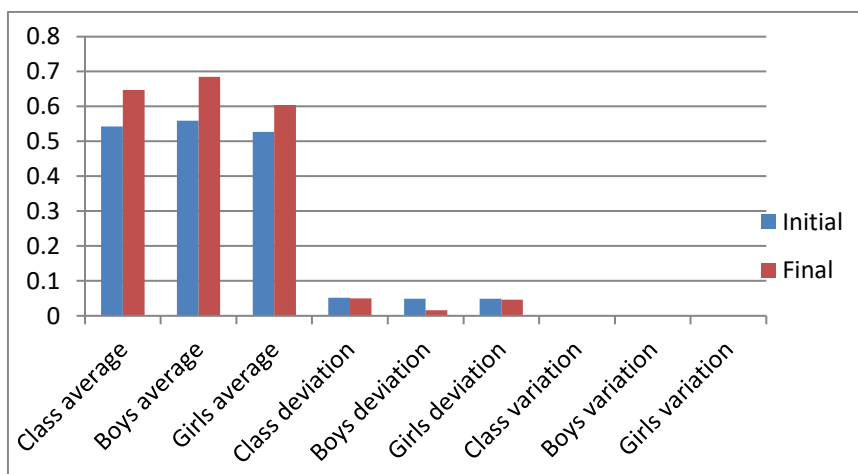


Fig. 2. High jump results analysis

The charts presented the three tests for each of the four examinations. In the following I will calculate the average, the deviation and the variability between the initial, intermediary and final tests (table 1).

Table 1. Results at tests achieved by subjects

Ratios	Sprint (s)		Long jump without momentum (m)		Long jump with momentum (m)		High jump (m)	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Class average	8,826	8,496	1,486	1,538	2,473	2,556	0,543	0,647
Boys average	8,573	8,227	1,526	1,609	2,496	2,598	0,559	0,685
Girls average	9,108	8,792	1,438	1,453	2,440	2,503	0,527	0,604
Class deviation	0,455	0,344	0,090	0,098	0,091	0,075	0,052	0,050
Boys	0,328	0,135	0,046	0,035	0,070	0,031	0,049	0,016

deviation								
Girls deviation	0,464	0,339	0,096	0,045	0,097	0,070	0,049	0,046
Class variation	1,980%	1,497%	0,392%	0,428%	0,395%	0,326%	0,225%	0,219%
Boys variation	1,426%	0,586%	0,200%	0,152%	0,305%	0,134%	0,213%	0,071%
Girls variation	2,019%	1,474%	0,415%	0,194%	0,421%	0,304%	0,212	0,199%

### Conclusions

At the end of the experiment, the final results confirm my initial hypothesis which states that games and game-like exercises play an important part in preparing pupils for jumps proficiency as well as means to improve their motor skills.

Movement games, along with the rest of the means used in physical education in general, have an important contribution in the implementation of the tasks required in the syllabus.

The use of movement games throughout the school year has helped me form and consolidate the pupils' basic motor skills and to develop a series of motor attributes such as speed, force, dexterity and the forms they may take. At the same time, I managed to create a pleasant atmosphere during lessons, a fact which both I and the pupils enjoyed very much.

A low physical education containing games and game-like exercises must be organized in such a way as to constantly maintain the pupils' attention and interest. Without these considerations, the pupils will not get the physical, mental, moral satisfaction that playing a game usually provides.

At the same time, the teacher must keep in mind the fact that pupils accumulate during a school day a certain degree of weariness that will have a negative influence on their participation in the physical education lessons. The exhaustion from other school activities will stand in the way of the pupils' dedication in the sports activities and they will not be able to use their full potential at all times.

The teacher must take all these into consideration when preparing the lesson plan and choose the appropriate means to draw the pupils' attention and interest to participate in movement activities. Thus, the games used must not take long to play and they must be varied, attractive, funny.

During lessons that involve games the pupils are very dedicated to the activities. They love it so much that sometimes forget all about exhaustion and would play all day long.

This research paper can be considered a compendium of exercises and games that can easily be used as successful means to teach the jumping drills from the lower secondary school syllabus.

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