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## THE DEVELOPMENT OF SPECIFIC SKILLS IN STUDENTS IN PRIMARY EDUCATION THROUGH THE USE OF OINA ELEMENTS

Vasile ONICA, Constantin CIORBĂ,

„Ion Creangă” State Pedagogical University from Chisinau

The diversity of tools used in the educational process considerably increases the interest of primary school pupils and makes the physical education lesson much more attractive, especially when it is conducted in the form of a game. Oina is a very complex sports game and the use of specific elements of this game in the formation of students' skills is relevant. The arguments are based on the analysis of the results of the scientific research carried out at two high schools in Chisinau with the participation of fourth-grade students. The physical education tools proposed in the experimental group's research highlighted some motor qualities that can be developed in the primary school pupils. With the help of some physical exercises specific to the Oina game of that were practiced during a year of studies, the indices for throwing the Oina ball into the target, hitting the Oina ball accurately, and hitting the Oina ball at a distance improved considerably.

**Keywords:** *scientific research, motor skills, technical elements, assessment, hitting the Oina ball with the stick (paddle), catching the ball, specific skills, initial assessment, final assessment, physical development, psychological development, explosive strength, speed, coordination qualities, precision of movements.*

### DEZVOLTAREA ABILITĂȚILOR SPECIFICE LA ELEVII DIN ÎNVĂȚĂMÂNTUL PRIMAR PRIN UTILIZAREA ELEMENTELOR OINA

Diversitatea instrumentelor folosite în procesul de învățământ crește considerabil interesul elevilor din ciclul primar și face lecția de educație fizică mult mai atractivă, mai ales atunci când se desfășoară sub formă de joc. Oina este un joc sportiv foarte complex, iar folosirea elementelor specifice acestui joc în formarea deprinderilor motrice ale elevilor este relevantă. Argumentele se bazează pe analiza rezultatelor cercetării științifice efectuate la două licee din Chișinău cu participarea elevilor de clasa a IV-a. Instrumentele de educație fizică propuse în cercetarea grupului experimental au evidențiat unele calități motrice care pot fi dezvoltate la elevii din ciclul primar. Cu ajutorul unor exercitii fizice specifice jocului de foosbal care s-au practicat pe parcursul unui an de studii, s-au îmbunătățit considerabil indicii de aruncare a foosbalului în tinta, a lovirii cu precizie a foosbalului și a lovirii la distanță a foosbalului.

**Cuvinte-cheie:** *cercetare științifică, calități motrice, elemente tehnice, evaluare, deprinderi motrice, bătaia mingii de oină cu bastonul (paleta), prinderea mingii, competențe specifice, evaluare inițială, evaluare finală, dezvoltare fizică, dezvoltare psihologică, forță explozivă, rapiditate, calități coordinative, precizia mișcărilor.*

#### Introduction

The national sports game Oina was highly appreciated by our ancestors, characterizing it as an important means of children's personality and physical development. At the end of the 19th century, Spiru Haret, through the „Education Reform” of 1898 as well as through other ministerial decisions, introduces the obligatory teaching of this sports game as a study discipline in Romanian schools of all levels. For the first time, an official Regulation of the game of Oină is approved and the first official competitions begin to take place. Spiru Haret said about Oină the following words, which have become historical: “Oina can bring new life to the Romanian school, being an admirable means of physical education, the true type of Romanian game.”

The educational potential of the Oina game is enormous. The Oina game is very complex and requires the learning of a large number of elements and technical procedures, and this fact requires the multilateral development of the human personality and forms a vast arsenal of motor skills. Oina contributes to the education of several motor qualities: good running speed, quick reflexes in self-defense movements, curling of movements, explosive strength, quickness in movements, and accuracy in throwing the ball and hitting

the ball with the stick. At the same time, in the practice of the game, the students are building coordination skills with teammates, concentration skills, operative thinking, and the ability to make quick decisions in ever-changing situations during the game. Along with other sports games: basketball, football, handball, volleyball, and others, Oina contributes to the formation of the students' personalities, the promotion of a healthy lifestyle and at the same time preserves the national cultural values, thus preserving the traditions of the Romanian nation.

By the provisions of the national curriculum in the discipline of Physical Education 2019 edition, teachers can optionally choose to study the national game Oina. To prepare students for secondary education, teachers and physical education teachers who teach in primary classes, in addition to the vast arsenal of tools, can also use Oina elements, certain sequences from the Oina game, or movement games specific to the Oina game.

To identify some efficient ways that would contribute to increasing the quality of the educational process, we expect to carry out a research regarding the familiarization of primary school students with the Oina game and propose a series of exercises specific to this sports game. Two institutions were selected to carry out this experiment and analyze the relevance of using Oina elements in primary school.

### **General characterization of the basic technical elements and procedures in the Oina sports game**

Oina is a team sport game played on a rectangular field that is approximately twice as long as it is wide. The game requires a stick and a small ball. The game is played in two halves, which are not limited in time. In the first half, one team is hitting the ball, and the second team is catching, and then in the second half, they will switch places. An inning ends when all players on the hitting team have hit the ball in the court and passed through the departure and return lanes, defending against the ball thrown by players from the opposing team.

The actions of the players who are hitting the ball (defending) are the following: serving the ball to the teammate, hitting the served ball with the stick, running on the field through the departure and return lane, catching or parrying the ball which is thrown at him by opponents, or dodging shots through different body movements. The players that hit the ball as far into the field as possible, have the opportunity to accumulate additional points within a match.

In this context, students must learn to serve the ball, throwing it vertically with great precision. The player must precisely handle the stick with which he will hit the ball.

After hitting the ball, the player chooses the right moment to enter the field and cross it so as not to be hit with the ball.

A specific action that the student will have to master is to parry the ball with the palms of his hands to protect himself from blows to the other parts of the body, blows which grant points to the opposing team, otherwise, he should try to dodge the thrown ball.

When the team is on the attack (catchment) the students must acquire the following actions: to master the ball – catching and passing it accurately to his teammates; to throw the ball with force and speed aiming at the players of the opposing team who are passing through the lane; to quickly pick up the ball hit by the opposing players; to recover the ball as quickly as possible if it was not accurately passed by the players in his team; to learn to catch the batted ball by the players of the opposing team, which would give game advantages or even reduce or nullify the potential points of a successful batting of the ball.

### **Analysis of the results of the initial special testing of fourth-grade students**

To carry out scientific research on the relevance of the use of oina elements in physical education lessons in primary education, an initial test of motor skills specific to oina game was carried out. Sixty-two students from “Mihai Viteazul” Theoretical High School and “Orizont” Theoretical High School in Chisinau were tested. The tests were selected based on the basic technical elements specific to the oina game. Three tests are directly related to the technique of the oina elements of aiming the players and hitting the Oina ball, and three tests were selected to evaluate the speed motoric qualities specific to the Oina and the ability of the students to handle the oina ball.

**The methodology for carrying out motoric tests specific to the Oina game is as follows**

1. *Throwing the Oina ball (120 g) at a distance.* Throwing the ball is done with one hand from the spot, in a 10 meters wide lane. On the field, the distance from the throwing place is marked every 50 centimeters. Students are given 3 attempts each, and the researcher records all three results in meters with decimals.

2. *Throwing the Oina ball (120 g) at the target.* The ball is thrown from the spot with one hand into a rectangular target 140 cm high and 50 cm wide fixed vertically at a distance of 10 meters from the throwing line. 5 attempts are given and the number of successful throws (when the ball hits the target) is recorded.

3. *Hitting the Oina ball with the paddle for accuracy.* The oina ball is thrown vertically upwards with one hand at a height of 1.5-2.0 meters, and with the second hand it is hit into the field with the help of a wooden paddle that is 7-8 centimeters wide and of 0.5 meters, secured for convenience with a round handle, as shown in the drawing below (Fig.1). Teh attempts are given, registering the number of attempts in which the student managed to hit the ball.

**Fig. 1. The paddle for batting the Oina ball.**



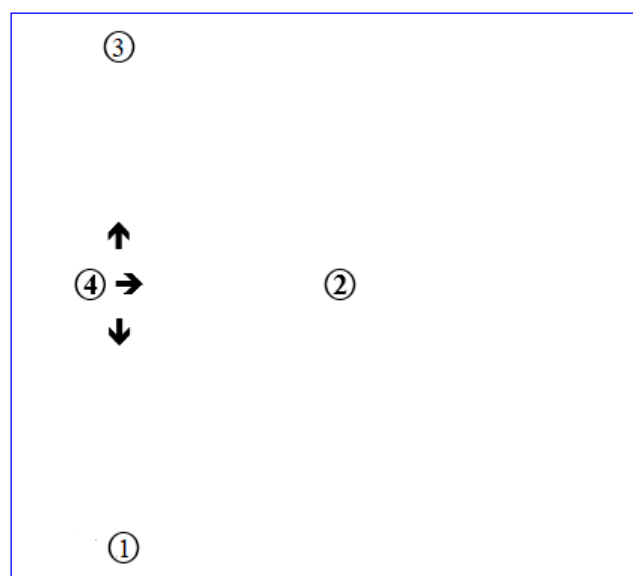
1. *Batting the Oina ball with the paddle at a distance.* The Oina ball is hit with the paddle as in test no. 3 in a corridor 10 meters wide. The ball is thrown with one hand up-vertically at a height of 1.5-2.0 meters, and with the other hand, it is hit with maximum power into the field. On the court, the distance from the hitting line is marked every 50 centimeters. Students are given 3 at-

tempts each and the researcher records all three results in meters with decimals on the research sheet.

2. *Throwing and catching the Oina ball against the wall.* At a distance of 3 meters from the wall, a line is drawn on the floor, where the student is placed with an Oina ball in hand. At the signal (the timer starts) the student throws the ball at the wall, and after the ricochet he must catch it, repeating this exercise at maximum speed 10 times. If the student crosses the throwing line, catching the ball does not count. The ball must be caught after bouncing without touching the floor. The timer stops when the student catches the ball 10 times.

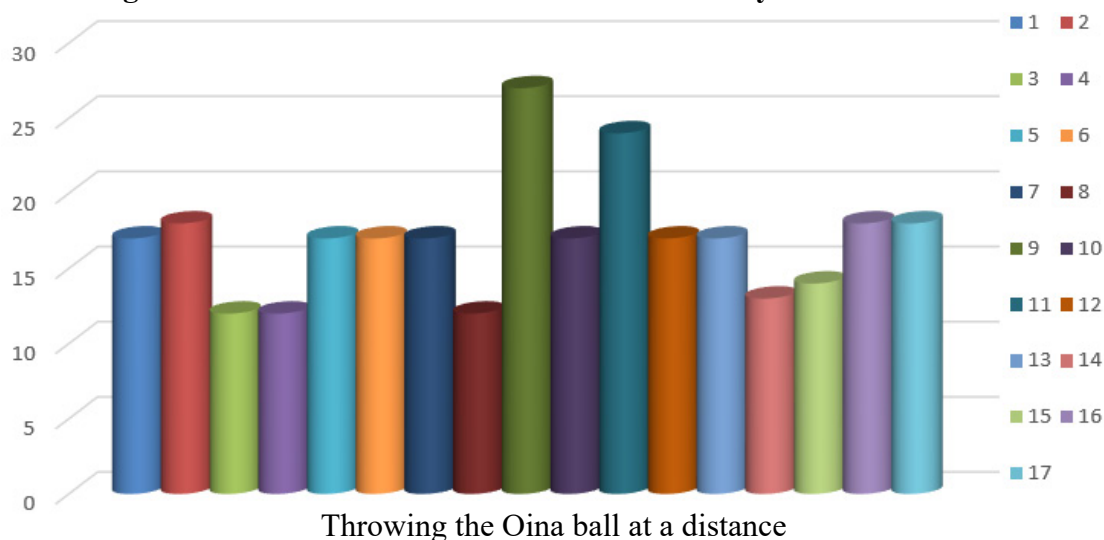
3. *Balls collection, 6x5m shuttle run (sec.).* Four circles are marked or placed on the field as indicated in the drawing below. The student stands in circle no. 4. An Oina ball is placed in circles 1, 2, and 3 each. At the researcher's signal, the student runs at full speed to circle no. 1, takes the ball, and puts it in circle no. 4. He turns to circle no. 2, takes the second ball which he places in circle no. 4, turns to circle no. 3, picks up the ball which he places in circle no. 4. The time in which the student placed the third ball in circle no. 4 is determined.

**Fig. 2. Placement of the circles for Balls collection, 6x5m shuttle run (sec.).**

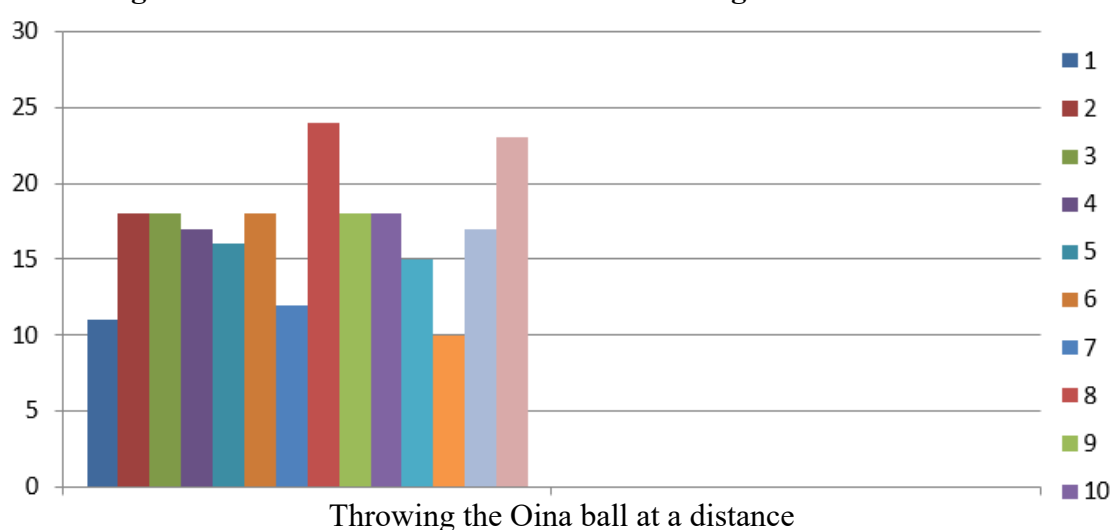


The results of the initial evaluation of Throw the Oina ball at a distance test are shown in Fig. 3 below.

**Fig. 3. Throwing the Oina ball at a distance shot results for boys.**



**Fig. 4. Throwing the Oina ball at a distance shot results for girls.**



Analyzing the results of the distance ball throwing test, it can be seen that the level of development of the explosive force qualities in 4th-grade students is very different for both girls and boys and varies between 8m and 27m for boys and between 10 and 24 meters for girls.

Comparing the results obtained in the experimental classes with the average for the country, we found the following. In the experimental group, only 29.4% of the tested students met the standards of learning efficiency for boys, compared to the national average for this test which, according to our study, is 61%. In the group of girls, 85.7% met the standards, compared to 67%, which represents the percentage of meeting the standards for throwing the mutton ball at a distance at the country level, according to the study conducted with the participation of students from the graduating classes of primary education.

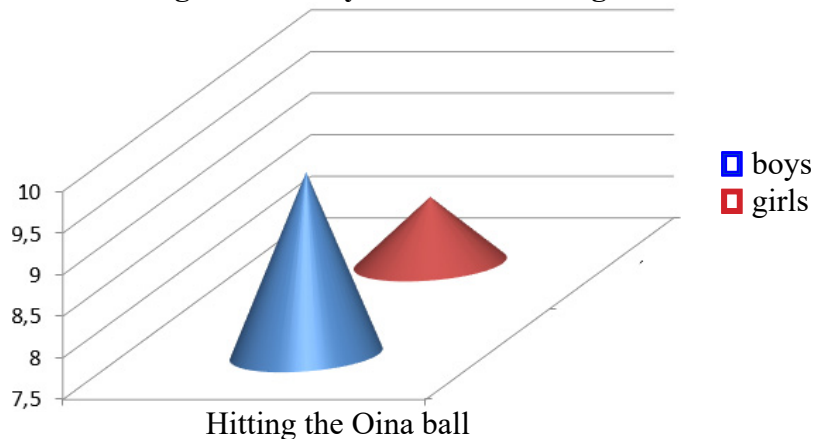
Analyzing the results of the „Throwing the ball at the target” test. We found that, out of the 5 attempts the students had for throwing at the target, 19 students out of the 34 did not hit the target even once, which is 55.9%. Girls showed slightly better results and more than half of them hit the target at least once (18 out of 28). About 35.7% of the girls never hit the target. Out of the total number of students tested, none of them hit all the balls in the target, meaning did not achieve the maximum result.

When hitting the ball with the paddle accurately, the results can be characterized as follows. Only one boy out of 34 and three girls out of 28 who participated in the test did not hit the ball once out of 10 attempts. The best result for both boys and girls was 5 accurate hits. And the average of the results was 2.91 for boys (29.1%) and 2.64 (26.4%) for girls.

Fig. 5 shows the results concerning hitting the ball with the paddle at a distance. The exercise that I proposed to the students for the first time, in other words, an unknown exercise, highlighted the fact that the students have a different levels of motor skills development. The results obtained by the boys in this test – hitting the Oina ball at a distance vary between the values of 1m and 20.5m. For girls, the values vary between 1 m and 17 m.

Fig. 5 shows the average results for boys and girls separately.

**Fig. 5. Average results for the girls’ and boys’ distance batting.**



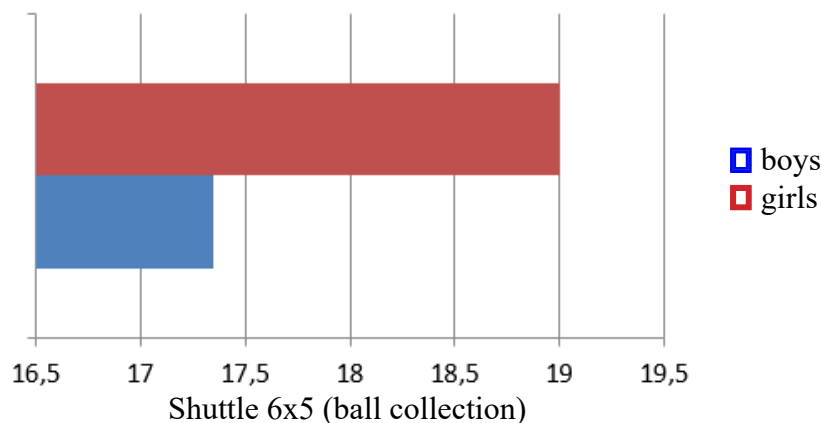
The following two tests were proposed to evaluate speed qualities. Throwing and catching the ball ricocheting off the wall at maximum speed is a test that evaluates the speed of contraction of the muscles of the upper limbs. Here is what we found by analyzing the results obtained:

- The difference between the time the students performed the test the fastest and the worst result among boys is 25.98 sec, and for girls, it is 29.28 sec.
- The average results for boys is 19.76 sec, and for girls it is 22.61 sec.

Carrying out this test requires good motoric coordination qualities, which are completely lacking in most students, for these reasons the difference between the results is very large. Many students during the execution of the test dropped the ball from their hands, for which reason the duration of the test increased suddenly.

Completing the shuttle test, a 6x5 m shuttle run also requires pupils to have high movement coordination. Fig. 6 shows the results of this test, the indicator being measured in seconds with decimals.

**Fig. 6. Average results (sec) in the Shuttle 6x5 m test for boys and girls.**



The time the students took the test varies from 13.14 sec to 22.8 sec – for boys, and from 11.42 sec to 26.4 sec – for girls.

The difference between the weakest and the best result for boys is 9.66 sec, and for girls - 14.98 sec.

Comparing the results, it was found that the value indices in boys are more homogenized, they are less dispersed.

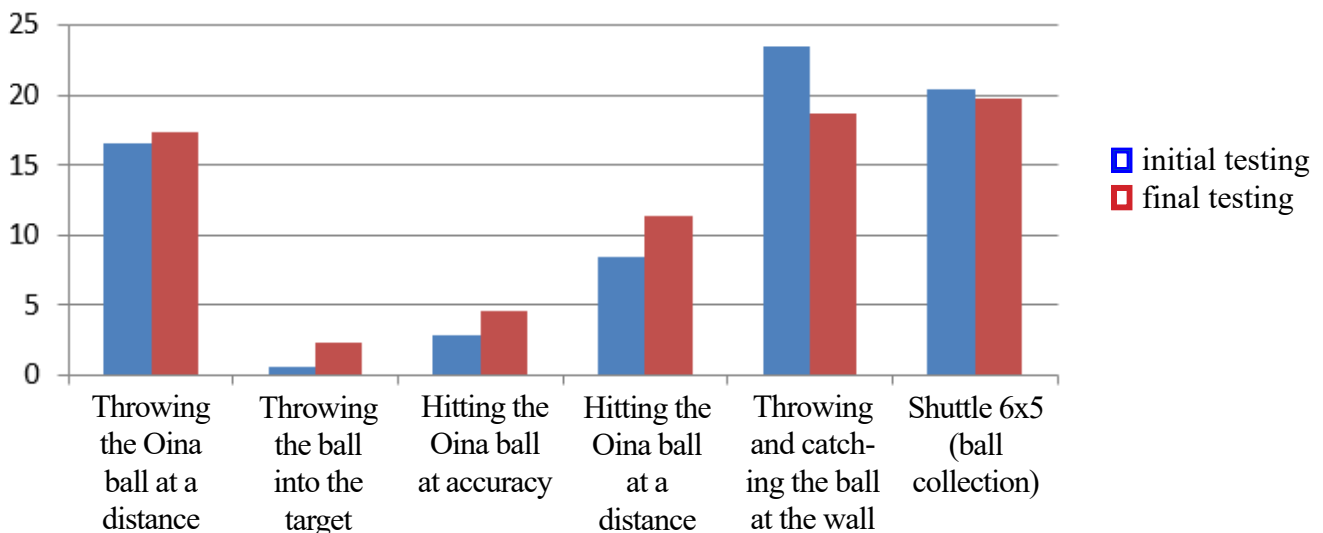
### The dynamics of the results of the special physical training and the acquisition of the technique of the basic technical procedures from Oină by the experimental group

To identify the relevance of using oina elements in physical education lessons in primary education, students in the experimental group were offered several exercises with a small ball and oina elements during the year to correctly learn the technique of their execution. Through movement games with oina elements, the students performed physical exercises to form new skills for handling the ball and the oina stick. At the end of the academic year, the students from the experimental group and the control group once again took the same tests that were included in the initial testing.

Next, the results of the final evaluation will be presented, they will be analyzed and compared with the indicators of the testing carried out at the beginning of the academic year.

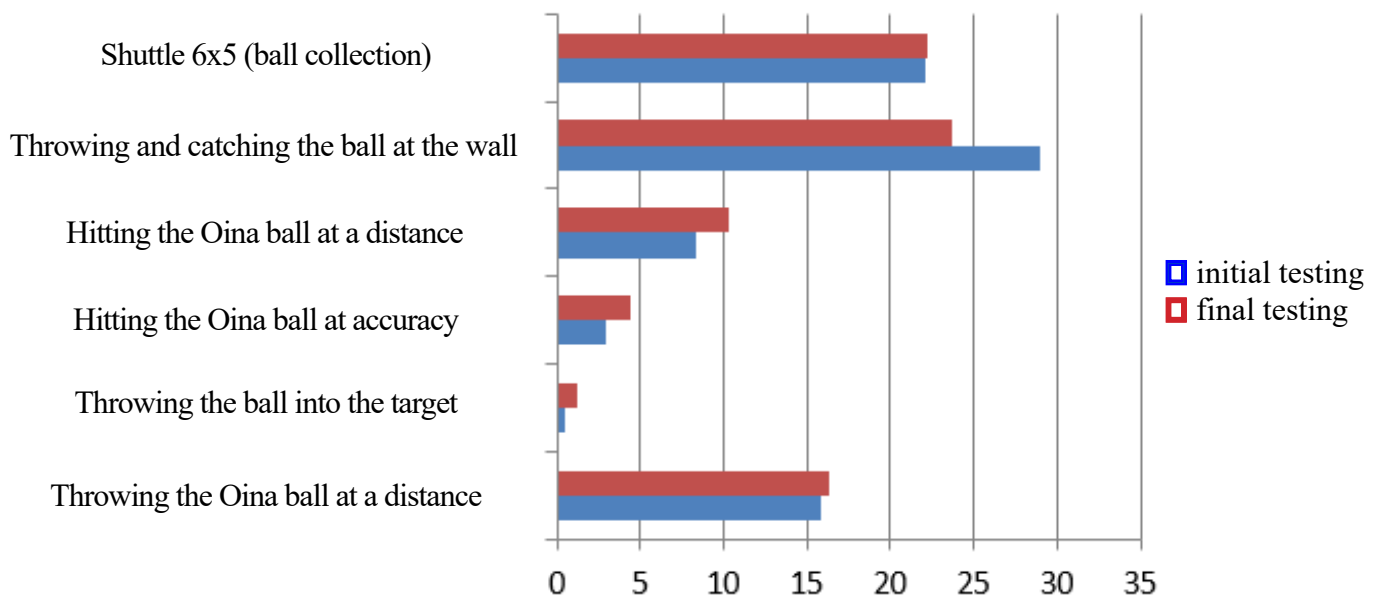
How the mean results for each test obtained by the boys changed are shown in Fig.7.

**Fig. 7. Dynamics of initial and final testing results in the experimental group of boys.**



The mean results for each test obtained by the girls in the experimental group are shown in Fig. 8.

**Fig. 8. Dynamics of initial and final testing results in the experimental group of girls.**



According to the final data obtained in the Naveta test in both girls and boys, an insignificant increase was observed compared to the initial testing. The average results for boys increased by 0.59 sec, and for

girls the result was weaker by 0.03 sec. This fact is explained by the fact that speed skills are very difficult to learn, and progress can be recorded in a longer time. At the same time, it was found that, during the year, the physical education teacher paid less attention to the execution of speed skills development exercises.

A significant increase in results was found in putting the Oina ball at the target and in hitting the Oina ball with the stick in both accuracy and distance. The average of the results when throwing the Oina ball at the target in the group of boys increased 4.4 times and in girls – 2.4 times. We believe that this increase is because for the children these exercises are something new and thus they performed them systematically and with greater interest.

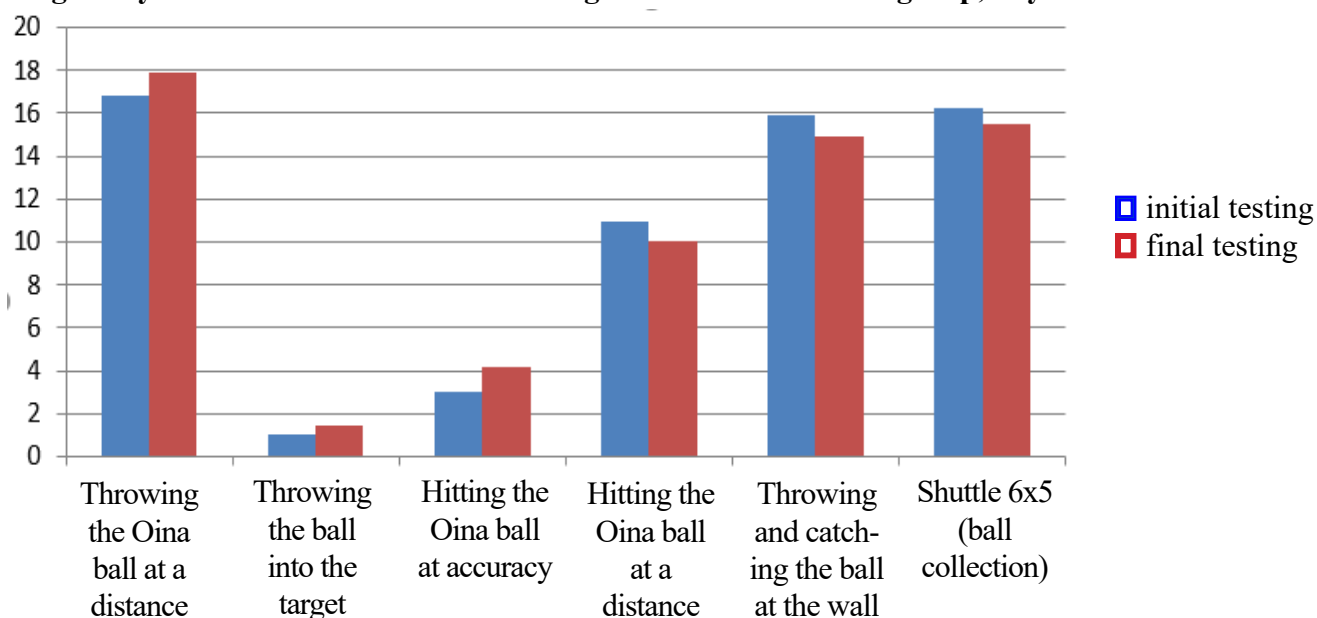
In hitting the Oina ball with the stick accurately, the boys demonstrated a 1.9 times better result in the final evaluation compared to the initial evaluation, and in the experimental group of girls, the average results increased by 1.5 times.

When hitting the Oina ball with a stick at a distance, the results also increased in the boys' group and the girls' group, respectively, by 34.9% and 24.1%.

Throwing and catching the Oina ball at the wall from a distance of 3 m also improved the results, for boys by 25.9% and for girls – by 22.4%.

Fig. 9 and 10 show the results recorded by the pupils in the control group (control).

**Fig. 9. Dynamics of initial and final testing results in the control group, boys.**

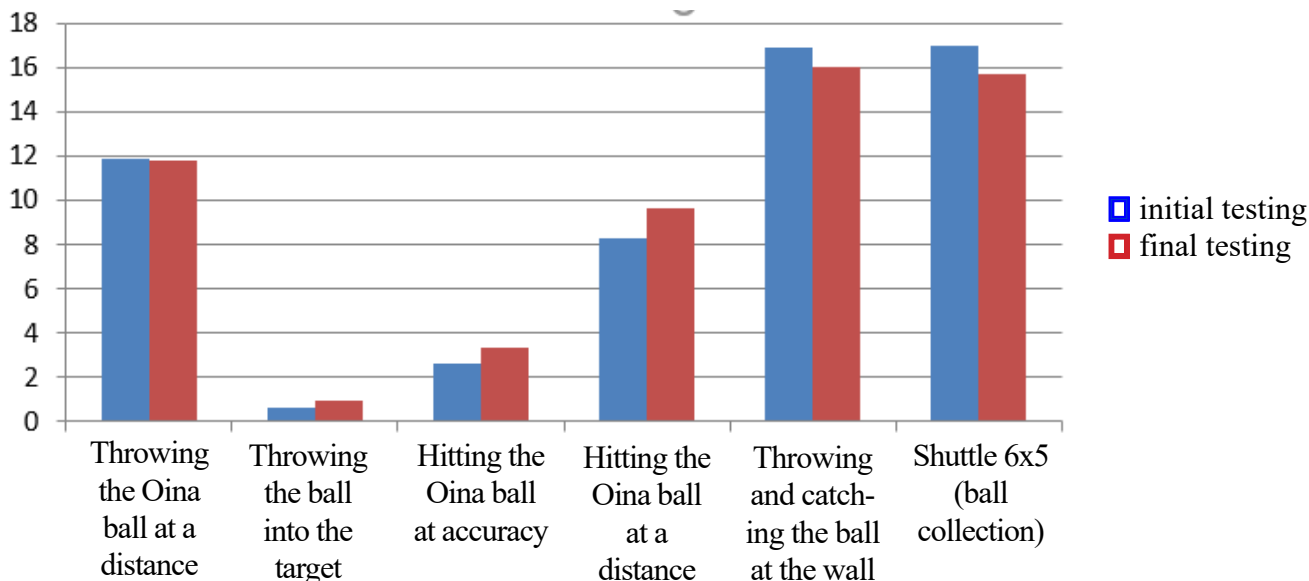


In the control group, boys, following the final assessment, insignificant changes were found in all tests. At the same time, it is necessary to mention that, in the final evaluation of the control group, the average of the results was lower than in the initial evaluation in the test of hitting the Oina ball with the paddle at a distance. The average dropped from 10.96 m to 10.05 m.

The results obtained in the 6 tests in the control group of girls are very close to the results of the initial testing. In the distance oina ball throw test, a very small decrease of 0.05 m in the calculated average is observed, according to the final data compared to the results obtained in the initial testing. In the other tests, a non-significant improvement of the average was found compared to the testing done at the beginning of the academic year. Comparing the test results of the control and experimental groups, we found that the average results from the initial testing are very close in some tests and far apart in others.

For example, in Throwing the ball at a distance, the difference was 0.27 m, in throwing at the target – 0.33 points, in hitting the ball accurately – 0.18 points. When hitting the ball at a distance, the difference was 2.5 m, resulting in the better result being recorded in the control group. Likewise, the best result was demonstrated in the control group and the following two tests: throwing and catching the Oina ball against the wall, the difference being 7.57 sec and 4.16 sec, respectively.

**Fig. 10. Dynamics of initial and final testing results in the control group of girls.**



**Table 1. The difference in the mean values of the test results in the groups experimental and control in boys.**

Tests	Mean results in the experimental group	Mean results in the control group	Difference
Throwing the Oina ball at a distance	16,59	16,86	0,27m
Throwing the ball into the target	0,53	1,06	0,53 points
Ball accuracy	2,82	3,00	0,18 points
Ball hitting distance	8,41	10,96	-2,55 m
Throwing and catching the ball at the wall	23.52	15.95	-7.57 sec
Shuttle 6x5m (ball collection)	20.36	16,20	-4.16 sec

Results obtained in the groups of girls in the initial assessment were included in table 2.

**Table 2. The difference in the mean values of the test results in the groups experimental and control in girls.**

Tests	Mean results in the experimental group	Mean results in the control group	Difference
Long throw	15,86	11,89	3,97m
Throwing the ball into the target	0,50	0,64	0,14 points
Ball accuracy	5,41	4,18	1,23 points
Ball hitting distance	8,29	8,31	-0,02 m
Throwing and catching the ball at the wall	28.99	16.88	-12.11 sec
Shuttle 6x5m (ball collection)	22.15	17.00	-5.15 sec

From the table presented, it can be seen that in three tests in the experimental group, better results were recorded, in hitting the Oina ball accurately, a weaker result, but with an insignificant difference. In Throwing and catching the Oina ball at the wall in time in the control group of girls a better result was recorded with a difference of 12.11 sec. and a difference of 5.15 sec. in the 6x5m shuttle test, also demonstrating a



better result than in the experimental group. At the same time, it is important to mention how these differences have changed following the research on the use of Oina elements in physical education lessons in the 4th grade. For this purpose, the differences in the mean results obtained at the initial assessment and the final assessment in the respective groups were compared.

**Table 3. The difference in the mean results obtained at the initial assessment and the final assessment in the experimental groups compared to the control group.**

Tests	Difference at initial testing	Difference at final testing	Results improvement
<b>boys</b>			
Throwing the Oina ball at a distance	-0,27 m	-0.55 m	-0.28 m
Throwing the ball into the target	-0,53 puncte	0.88	+1.41 points
Ball accuracy	-0,18 puncte	1.23	+1,41 points
Ball hitting distance	-2,55 m	1.30	+3,85 m
Throwing and catching the ball at the wall	-7.57 sec	-3.75	+3,82 m
Shuttle 6x5m (ball collection)	-4.16 sec	-4.24	-0,08 sec
<b>girls</b>			
Throwing the Oina ball at a distance	3,97 m	3.60m	+0,37 m
Throwing the ball into the target	-0,14 puncte	0.28	+0,42 points
Ball accuracy	1,23 puncte	1.07	-0.16 points
Ball hitting distance	-0,02 m	0.68	+0,70 m
Throwing and catching the ball at the wall	-12.11 sec	-7.68	+4,43 sec
Shuttle 6x5m (ball collection)	-5.15 sec	-6.47	-1,32 sec

In the initial evaluation, the results of the control group were mostly higher than in the experimental group. Only in throwing the ball at a distance and hitting the Oina ball with the stick accurately in the experimental group of girls, the average results obtained were higher than in the control group.

At the end of the academic year, in the final evaluation, the results were better in the following tests: throwing the ball at the girls' distance (+3.60 m); throwing the ball at the target boys (+0.88 m); throwing the ball at the girls' target (+0.64 m); Hitting the ball accurately for boys (+1.23); Hitting the ball accurately for boys (+1.07).

At the same time, in the tests of throwing and catching the ricocheted ball from the wall and the 6x5m shuttle, although the results in the control groups were better than in the experimental groups and the final evaluation, the difference between the mean results decreased.

Thus, we can conclude that the experimental groups of both boys and girls who practiced elements of Oina during physical education lessons made better progress than the control groups.

### **The impact of the use of Oina elements and movement games specific to the Oina game on the development of primary school students**

The scientific research carried out in the 4th grade of the „Mihai Viteazul” Theoretical High School also produced some changes in the life of the high school. The institution selected for study by the middle school classes the sports game Oina from the module „National sports”, the optional module of the National Curriculum in the discipline Physical Education, edition 2019. In the institution, the word Oina is heard more and more often. The students who did not select the Oina module are curious to touch the ball and the oina stick, which they called the „baseball bat”, to our great regret.

The administration of the institution contributed to the display of a large poster in the gym with images from the Oina game, which pleases the children's eyes. The first Oina competition was held in the institution, after which the children fell in love with our national game Oina.

The most important thing is that the students of the 4th grade, who participated in the scientific research, felt that they acquired some important skills that they will need all their lives.

First of all, they became more dexterous. Carrying out a series of exercises with the Oina ball during physical education lessons, they began to „tame” the Oina, which at first slipped out of their hands very easily. After practicing the Oina elements they noticed that they could surpass themselves in performing precision movements, throwing the oina ball at the target.

Secondly, the students achieved progress in handling the Oina stick, which developed their muscle strength, the ability to coordinate their movements, the precision of the movements, and the ability to synchronize the movements with the partner serving the ball.

Thirdly, the Oina ball exercises contributed to the students' development of courage. In the first lessons of Oina they were afraid of the Oina ball and often steered clear of it when their partners passed the ball, after learning to catch the ball the students caught it with great pleasure from different positions.

Fourthly, after practicing the movement games with Oina elements, the students started to cooperate better with their colleagues, and teammates in recovering the balls, and in passing the balls accurately. Students began to help each other to win a competition.

Fifth, the students became more persistent in achieving the goals of developing their bodies and helping the team to improve their performance. Relays with Oina elements, throwing the ball at the target, passing the Oina ball, and hitting the ball with the stick, developed children's competitive spirit, made them more respectful towards the opposing team, more responsible for observing the rules imposed by the game or relays.

Referring to the other tests that the students took at the beginning and the end of the school year as part of the scientific research carried out, we can see that the physiological indices of the students in the experimental group increased, according to the average calculated for the lung volume from 1690 ml to 1846 ml. likewise, the effort capacity of the tested students increased, according to the results of the final evaluation.

The analysis of the research results allows us to conclude that the use of the specific means of the national sports game Oina in physical education lessons contributes to the development of motor skills of primary school students, lays the foundations for the formation of some character traits of the child's personality and contributes to the good functioning of all systems of the growing body of students of that age.

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**Data about the authors:**

**Vasile ONICA**, PhD student, Physical Education and Sport State University from Chisinau, physical education teacher, higher teaching degree.

**ORCID:** 0009-0003-9428-0102

**E-mail:** onicavi69@gmail.com

**Constantin CIORBĂ**, PhD, Prof., „Ion Creangă” State Pedagogical University from Chisinau.

**ORCID:** 0000-0001-7125-2545

**E-mail:** ciorbaconst@yahoo.com

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