

Increasing the efficiency of the physical education and sports lesson by applying the means of handball

Mihai Ciubotaru

PhD student, State University of Physical Education and Sports,
Chisinau, Rep. Moldova

Keywords: students, means, experts, tests, progress

Abstract

The physical education lesson is a pedagogical framework based on an organized teaching activity, led by a specialized teacher who passed on knowledge to students, in order to acquire them. The accumulation of skills and abilities lead to the formation of skills and attitudes specific to the discipline of physical education. The problem of the efficiency of the physical education lesson, of the modernization of education in general, of all grades, is currently a requirement of our contemporary society, being a very topical concern in almost all countries of the world. The purpose of the research is to implement the means specific to the game of handball in high school, with a focus on the seventh grade, leading to the achievement of physical education objectives and school programs to increase the efficiency of physical education and sports lessons.

Introduction

Physical education, from the perspective of Triboi V. [13] is a "component of general education, expressed through a type of motor activity (along with sports training, competition, leisure activities, body expression activities and recovery activities), carried out in an organized or independent way, whose specifically conceived content aims at optimizing the biomotor potential of the individual, as well as its cognitive, affective and social-relational components and therefore obtaining the quality of life".

Any physical education lesson, held outdoors or in a less appropriate space, requires a good organization of this activity. In organizing the lesson, the teacher must be very careful about the space where the instructive-educational process takes place, the materials

available, the number of students, the effectiveness of the chosen exercises, the achievement of the proposed objectives. The measures taken in order to carry out the physical education lesson represent the basic components of the didactic technology with an important role in accomplishing the proposed topics. According to some authors,[9,11] the lesson is considered the basic form of the instructive-educational process of physical education having in its content contents that lead to the increase of the efficiency of the whole activity.

The teaching of physical education and sports at gymnasium level depends very much on the professionalism shown by the teacher in the classes held in the primary cycle. During that period, the student accumulates basic information and skills, making it very easy to move to another level. The quality and efficiency of acquiring information, basic motor skills and skills specific to primary school sports comes as a complement to the middle school cycle.

Handball [2,3,5,6] is a sports game accessible to all students because most technical procedures are performed by hand, the rules of the game are simple and easy to implement, the material conditions necessary for the game are not expensive, the elements used are shapes natural of human motor acts, talking about running, jumping, throwing, catching, the ball used is smaller than in other sports and can be easily maneuvered.

In the vision of Acsinte A. [1] the characteristics of the handball game are the following:

- the game is collective and dynamic and requires the body physically and mentally;
- it is accessible to all, regardless of motor training, or the age of the practitioners;
- develops motor qualities, contributes to the correct formation of motor skills and psycho-motor skills;
- it can be easily practiced in physical education lessons, because it does not require special devices / materials or a demanding space.

Material-method

In order to ascertain the level of technical training of seventh grade students, we used in the research for motor skills and abilities in handball the method of experts through which experienced teachers applied grades to 3 tests, in September 2019 the initial test, in November 2019 intermediate testing and in November 2020 the final testing, both in the experiment group and in the control group. Individual sheets were used to assess the technical elements. The teaching staff of the experts

included three teachers with a scientific degree I who teach in middle school classes and have over 20 years of teaching experience. The testing period was during the 2019-2020 and 2020-2021 school years.

The research methods used in the experiment were: the bibliographic study method, the observation method, the test method, the mathematical method as well as the graphic and tabular method [4].

The tests used in the research were composed of three technical-tactical structures and bilateral play.

Technical-tactical structure - a move was made in a triangle (with a side of 3 m), collecting the ball 1 m from the top of the triangle, simple dribbling at a distance of 7 m, throwing at the goal with support on the ground [7,8].

Execution errors [10]

- Displacement in a deficient fundamental position (exaggerated approach or distance of the legs, stretched knees, arms left next to the body);
- During the execution of the simple dribble the following aspects are observed: the ball beats in front of the feet, it beats strongly in the ground making it exceed the level of the head, hitting the ball with the palm leading to loss of ball control, bending the torso too much on the ball;
- The throwing at the goal is executed having before the same leg with the throwing arm, it imprints too much force in the throwing and throws over the gate;
- Committing steps, double-dribbling.

Technical-tactical structure - moved in a triangle (with a side of 3 m), collecting the ball 1 m from the top of the triangle, passing to a teammate, catching, throwing at the goal from the jump [7,8].

Execution errors [10]

- Displacement in a deficient fundamental position (exaggerated approach or distance of the legs, stretched knees, arms left next to the body);
- During the passing of the ball the shoulder of the throwing arm is not brought back, the surface of the palm when releasing the ball is under the ball, the position of the foot forward simultaneously with the throwing arm;
- In order to catch the ball, the position of the fingers should not be taken into account so that they are not glued together, the elbows are bent excessively, the strong tightening of the ball between the palms leads to the loss of control;

- When throwing at the goal from the jump the steps of the elk are too big, determining a defective position when detaching, stopping on the spot and then throwing at the goal, the beating performed on both legs;

- Committing steps, double-dribbling.

Technical-tactical structure - passes were made in pairs from moving, from running, over a distance of 30 m and throwing at the goal with support on the ground in the presence of a semi-active defender. The distance between the performers is 4 m [12].

Execution errors:

- Displacement in a deficient fundamental position;
- During the passing of the ball the shoulder of the throwing arm is not brought back, the surface of the palm when releasing the ball is under the ball, the position of the foot forward simultaneously with the throwing arm;
- In order to catch the ball, the position of the fingers should not be taken into account so that they are not glued together, the elbows are bent excessively, the strong tightening of the ball between the palms leads to the loss of control;
- The throw at the gate is executed having before the same leg with the throwing arm;
- Committing steps, double-dribbling.

At the bilateral game will be appreciated:

- the effectiveness of the completion procedure 2 puncture
- cooperation with partners 2 puncture
- active participation in both the attack phase and the defense phase 3 puncture
- observance of the main rules of the game 2 puncture

It is assessed from a maximum grade of 10 and a point is awarded ex officio.

Results and discussions

The subjects who participated in this experiment are students at the Technological High School "Torgu Vârnav Liteanu", Liteni city, Suceava county. The research was conducted with the help of 40 students, from the seventh grade, 11 boys and 10 girls representing the experiment class and 9 boys and 10 girls representing the control class.

Table 1. Intergroup analysis for the notes of the experts from the girls' experiment and witness classes at the initial, intermediate and final testing

Specific	Statistical	CE/CM
----------	-------------	-------

tests	indices	T _I	T _I	T _{INT}	T _{INT}	T _F	T _F
Structure nr. 1	X ±m	6,69±0,07	6,74±0,05	7,7±0,09	7,66±0,05	9,4±0,08	8,93±0,06
	t	0,57		0,39		4,75	
	P	>0,05		>0,05		<0,001	
Structure nr. 2	X ±m	6,65±0,07	6,74±0,05	7,85±0,07	7,54±0,06	9,35±0,06	8,71±0,06
	t	0,98		3,51		7,30	
	P	>0,05		<0,01		<0,001	
Structure nr. 3	X ±m	6,74±0,07	6,74±0,05	7,95±0,06	7,48±0,07	9,2±0,07	8,48±0,08
	t	0,00		5,31		6,88	
	P	>0,05		<0,001		<0,001	
Bilateral game	X ±m	6,59±0,06	6,34±0,08	8,01±0,05	7,3±0,06	9,09±0,04	8,24±0,05
	t	2,49		9,36		12,98	
	P	<0,05		<0,001		<0,001	

Note: CE – Experimental class, n= 10; CM – Witness class, n= 10.

P – 0,05; 0,01; 0,001;

f = 18; t = 2,100 2,878 3,921

Table 2. Intergroup analysis for the notes of the experts from the boys' experiment and witness classes at the initial, intermediate and final testing

Specific tests	Statistical indices	CE/CM					
		T _I	T _I	T _{INT}	T _{INT}	T _F	T _F
Structure nr. 1	X ±m	6,73±0,05	6,65±0,08	8,09±0,07	7,67±0,12	9,50±0,07	8,71±0,07
	t	0,84		3,30		8,48	
	P	>0,05		<0,01		<0,001	
Structure nr. 2	X ±m	6,66±0,08	6,67±0,08	8,26±0,05	7,61±0,08	9,30±0,09	8,72±0,12
	t	0,06		6,95		3,88	
	P	>0,05		<0,001		<0,01	
Structure nr. 3	X ±m	6,64±0,06	6,71±0,06	8,03±0,07	7,54±0,07	9,27±0,08	8,57±0,13
	t	0,85		4,96		4,95	
	P	>0,05		<0,001		<0,001	
Bilateral game	X ±m	6,80±0,06	6,74±0,06	8,14±0,06	7,58±0,09	9,13±0,04	8,64±0,06
	t	0,73		5,30		7,09	
	P	>0,05		<0,001		<0,001	

Note: CE – Experimental class, n= 11; CM – Witness class, n= 9.

P – 0,05; 0,01; 0,001;

f = 18; t = 2,100 2,878 3,921

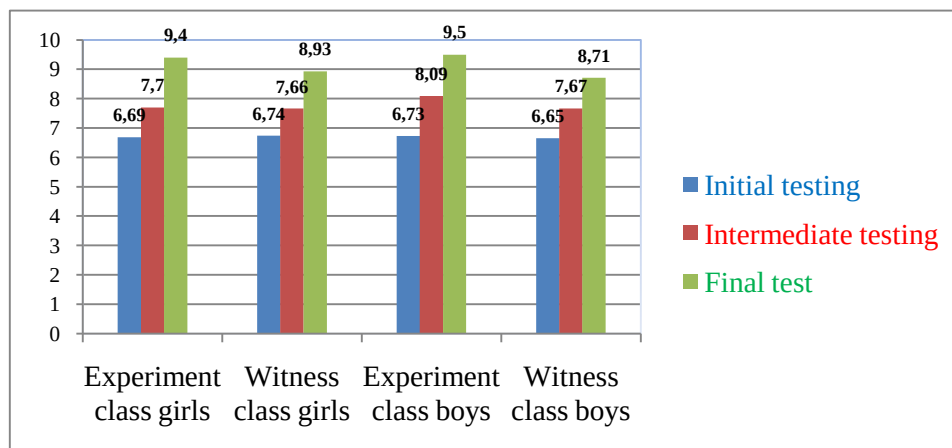


FIG. 1. Graphic representation of the notes of the experts from the experiment and control classes, girls and boys at the initial, intermediate and final testing, structure no. 1

The progress of the experimental class, both in girls and boys, is visibly better than in the control class. In girls, it can be seen, at the initial testing, the experiment class obtains the average of the grades at structure no. 1 of 6.69, and in the final test 9.4 with an increase of marks by 2.71 points and in the control class at the initial test they have an average of 6.64 and the final test 8.93, with a difference of 2.29 points. (Figure 1.)

Between groups, at the initial test we achieved a value of 0.57, $P > 0.05$, at the intermediate test 0.39, $P > 0.05$, insignificant values, and at the final test 4.75, $P < 0.001$ there are differences significant (Table 1.).

The boys in both groups progressed from one test to the next, progressing 2.77 points from 6.73 to 9.4 in the experiment class and 2.06 in the control class from 6.65 to 8.71 (Figure 1.). Analyzing statistically the two groups, at the initial testing there are no significant differences, while at the intermediate and final testing there are significant differences, $P < 0.01$, respectively $P < 0.001$ (Table 2.).

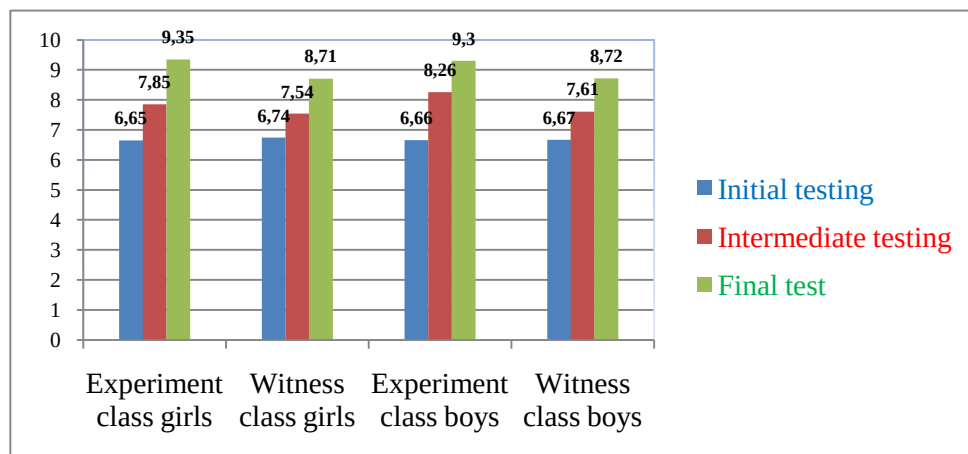


FIG. 2. Graphic representation of the notes of the experts from the experiment and control classes, girls and boys at the initial, intermediate and final testing, structure no. 2

At the structure no. 2 girls from the experiment class obtained an average value of 6.65 in the initial test, 7.85 in the intermediate test and 9.35 in the final test. In the control class, in the initial test the girls obtained 6.74, in the intermediate test 7.54 and 8.71 in the final test (Figure 2.).

Comparing the experiment class with the control class we find that from one test to another the value of significance increases, thus, at the initial test there is a value of 0.98, resulting in insignificant differences, $P > 0.05$, at the intermediate test a value of 3, 51 having significant differences, $P < 0.01$ and at the final testing a value of 7.30 resulting in significant differences, $P < 0.001$ (Table 1.).

In the boys, progress was made in both groups, so the experiment group starts with the average value at the initial test of 6.66 and reaches the final test at 9.30, and in the control class we get 6.67 at the initial test, with 0.01 points more than the experiment class and reaches the final test at 8.72 with 0.58 points less (Figure 2.).

Analyzing statistically the two groups, we observe at the initial test we have insignificant differences, $P > 0.05$, at the intermediate test we have significant differences $P < 0.001$, and at the final test again there are significant values $P < 0.01$ (Table 2.).

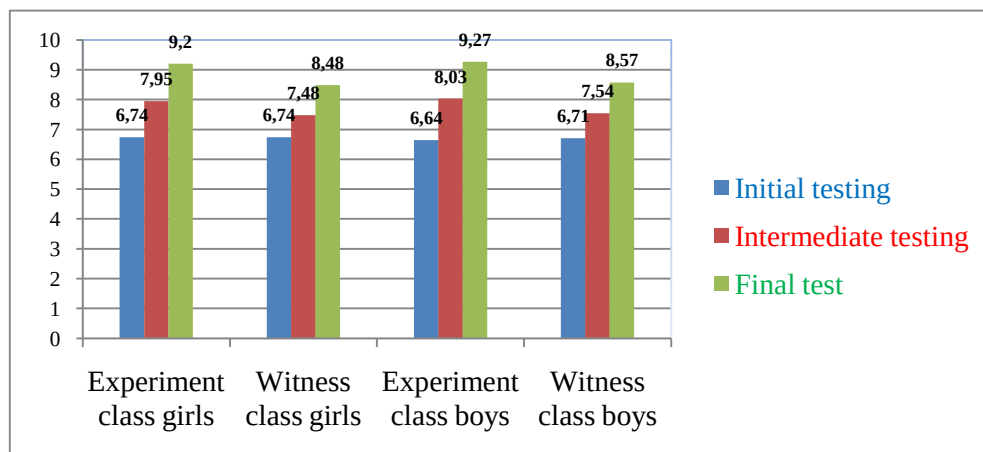


FIG. 3. Graphic representation of the notes of the experts from the experiment and control classes, girls and boys at the initial, intermediate and final testing, structure no. 3

The average of the grades obtained at structure no. 3 of the girls participating in the experiment express progress, but with differences between the values of significance. Thus, the experiment group at the initial test obtained a progress of 11.67 between the initial and the intermediate test, $P < 0.001$, 18.53 between the intermediate and the final test, $P < 0.001$ and 23.82 between the initial and the final test. In the control class, in the initial test, they obtained a progress of 8.49 between the initial and the intermediate test, $P < 0.001$, 8.19 between the intermediate and the final test, $P < 0.001$ and 15.18 between the initial and the final test (Table 1.).

Analyzing the results from a statistical point of view, the girls, at the final test, obtain the value of 6.88 ($P < 0.001$), making significant differences between groups, at the intermediate test the value of 9.36 ($P < 0.001$), there are significant differences also at the initial testing starting from equal values there is no significance (Table 1.).

In the experiment group, the boys achieved the following values: initial test 6.64, intermediate test 8.03 and final test 9.27. In the control class we find in the initial test 6.71, in the intermediate test 7.54 and in the final test 8.57. The difference in the final test between the two groups is 0.70 points (Figure 3.).

Comparing the results between groups we have significant differences in the intermediate test and the final test, $P < 0.001$, and in the initial test we obtain a value of 0.73, $P > 0.05$, having no significant differences (Table 2.).

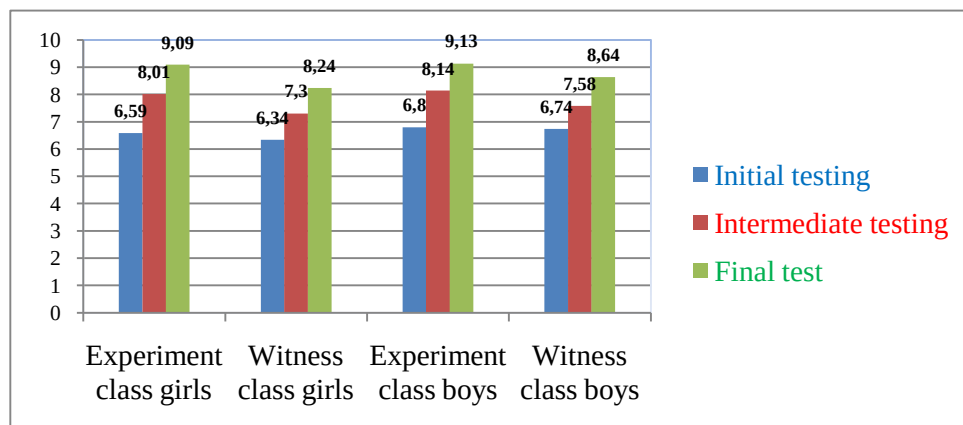


FIG. 4. Graphic representation of the notes of the experts from the experiment and control classes, girls and boys at the initial, intermediate and final testing, bilateral game

Comparing statistically the two groups in the bilateral game we can see that the girls in the initial test have an average value of 2.49, $P > 0.05$, in the intermediate test 9.36, $P < 0.001$ and in the final test 12.98, $P < 0.001$, these values having significance (Table 1.).

In boys, a value of 0.73 was achieved in the initial test, with no significant differences, 5.3 in the intermediate test and 7.09 in the final test with significant values (Table 2.).

Conclusions

From the experts' perspective, we can say that both classes have made progress in the execution of research structures. The difference is made by the average of the grades obtained by the experiment class compared to the control class, the grades being higher. Thus, girls and boys from both classes, go to the initial test with close grades, no significant values between groups, $P > 0.05$, reaching the final test experiment class to obtain higher grades achieving significant differences, $P < 0.001$.

References

- [1]Acsinte, A. Teoria și practica handbalului. Curs pentru studenții înscriși la IF/IFR. Bacău: Alma Mater, 2016, p. 32-33. ISBN 978-606-527-480-8;
- [2]Chirazi, M., Constantin, I. L. Jocul de handbal, mijloc important al educației fizice și sportului. În Știința culturii fizice, Chișinău: USEFS, 2018, nr. 31/2. ISSN 1857-4114;

- [3]Constantin, I. L., Chirazi, M. Învățarea jocului de handbal prin jocuri de mișcare la elevii ciclului primar. În Știința culturii fizice, Chișinău: USEFS, nr. 33/1, 2019. p. 5-6. ISSN 1857-4114;
- [4]Epuran, M., Metodologia cercetării activităților corporale ed. a II-a, București, Ed. FEST, 2005;
- [5]Ghervan, P. Handbal. Pregătirea în etapa de inițiere (9-10ani). București: Didactică și Pedagogică, 2014, p. 10-30. ISBN 978-973-30-3598-5;
- [6]Ghervan, P. Handbal. Repere conceptuale. București: Didactică și Pedagogică, 2014, p. 5-7. ISBN: 978-973-30-3655-5;
- [7]Leuciuc, F.-V. Handbal îndrumar practico-metodic. Suceava: Universității Ștefan cel Mare, 2008. p. 7-8. p. 9-121. ISBN 978-973-666-273-7;
- [8]M.E.N. Programa școlară pentru disciplina EDUCAȚIE FIZICĂ ȘI SPORT , clasele a V-a – a VIII-a. Anexa nr. 2 la ordinul ministrului educației naționale nr. 3393 / 28.02.2017, București: 2017;
- [9]Macavei, E. Teoria educației. București: Aramis, 2001. p. 55-158, p. 116-157. ISBN 973-8294-01-0;
- [10]Mihăilă, I., Popescu, D. C. Handbal - Îndrumar practico-metodic. Craiova: Universitaria, 2006. p. 3-169. ISBN 973-742-264-3;
- [11]Scarlat, B. M, Scarlat, E. Educație fizică și sport. Învățământ liceal. București: Didactică și Pedagogică, 2003. p. 5-22. ISBN 973-30-2715-4, 978-973-30-2715-7;
- [12]Scarlat, E., Scarlat, B. M. Tratat de educație fizică. București, Editura Didactică și Pedagogică, 2011. 12 p., 18 p. ISBN 973-30-2915-1;
- [13]Triboi, V. Teoria educației fizice și sportului, (curs universitar). Chișinău: USEFS, 2014, 65 p. ISBN 978-9975-131-03-2.