

CONTRIBUTIONS ON OPTIMIZING THE LEARNING OF SPECIFIC CONTENTS OF THE VIth GRADE HANDBALL GAME

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Abstract:

In the physical education class, handball appears as a sports game, being practiced by both girls and boys, its popularity being equal among students. Due to the fact that it is an accessible game, regarding the materials and work surface, handball is one of the most popular sports games used by teachers, in their teaching, in physical education lessons. The hypothesis underlying this paper is that one can optimize the means of teaching the handball game, as well as learning new technical-tactical elements in the sixth grade, if new and dynamic teaching methods are used, which will be attractive for students. In order to obtain favorable results for the process of learning and strengthening the motor skills specific to a sports game, it is necessary that the training should be carried out constantly and continuously, without too many interruptions. From this point of view I can say that there are setbacks in the case of schools, especially in rural areas, due to the lack of sports base. Being played only when the weather conditions are favorable, there are quite long breaks in the teaching process. These lead to losses, of a motor nature (forget certain elements) and of a temporal nature (time is lost from the following period because it is necessary to insist on regaining lost knowledge).

Introduction

The handball game has its basis in the physical education lesson that has as a means of achieving the handball game, with the learning of the technical-tactical skills specific to it [1].

The handball game seen as a means of physical education leads to a harmonious physical development, helps to improve the physical

training indices, as well as to strengthen the health, to develop the personality and to develop the motor qualities [6].

It can be stated that the handball game aims to develop all the motor qualities, due to the dynamics of the game, which is why handball is also called ball athletics [2].

The game of handball has an "honorable" place in the physical education programme, being found most often among the sports games chosen by the teachers to be taught in the secondary school classes and beyond [4].

The intense development of handball in the last period, especially among the youth, raises great demands from the organizational, methodical point of view. The school constituted and constitutes the main instrument through which the educational ideal was realized in the organized form "active and conscious".

Due to the effects that handball has on the human body, it has been introduced into physical education programs in the secondary school [3].

The handball technique consists of a wide range of specific motor skills that have as main objective the handling of the ball, but also the movement of the players in the game through it, the ultimate goal being maximum efficiency.

The handball game technique is coded by the knowledge of the game regulation, which helps to create a clear image in the technical procedures.

The technical procedures are those that result from the way in which the technical elements are executed. Therefore, the technical component, the throw, is closely linked to the action by which the player strives to score, without establishing the way in which this materializes. Determining the method of throwing (running, jumping, diving, arching) establishes the technical procedure of the throwing element category.

Material and methods

The hypothesis underlying this paper is that one can optimize the means of teaching the handball game, as well as learning new technical-tactical elements in the sixth grade if new and dynamic teaching methods are used, which will be attractive for students.

The purpose of the paper is to capitalize on the means and methods used in teaching the elements of the handball game in the 6th grade.

The experiment was conducted at the „George Tofan” School in Bilca, between April 2018-May 2019, with the students of the 6th grade.

The lessons were held outdoors, on the school's sports ground, during the outdoor classes. 24pupils took part at the experiment,12 students in the control group (6 girls and 6 boys) and 12 students in the experimental group (6 girls and 6 boys). The research methods used were scientific documentation, observation, experiment, analytical-statistical method with clues: arithmetic mean, standard deviation and coefficient of variation and graphical method.

The battery of tests used in the experiment included :

1. Dribbling on a straight line 20 meters away
2. Dribbling through milestones 20 meters apart
3. The square movement
4. Goal throw, preceded by 10 meters dribbling
5. Dribbling, passing and shooting at the goal

Results and discussions

Tables 1-4 show the results obtained in the initial and final tests of the control and experimental group subjects.

Table no. 1. The results obtained at the initial test in the control group

Nr. crt	Surname First name initials	<i>Dribbling on a straight line 20 meters away (seconds)</i>	<i>Dribbling through milestones 20 meters apart (seconds)</i>	<i>The Square movement (seconds)</i>	<i>Goal throw, preceded by 10 meters dribbling (seconds)</i>	<i>Dribbling, passing and shooting at the goal (seconds)</i>
1.	C.R.	6.33	7.34	31.3	8.43	10.45
2.	O.V.	7.54	7.54	33.4	8.23	11.34
3.	C.S.	6.98	7.98	32.5	7.86	11.65
4.	L.O	7.12	7.45	31.4	7.94	11.75
5.	D.S	6.56	7.34	32.1	8.43	10.54
6.	D.A	5.89	6.89	31.5	8.12	10.89

7.	L.P	6.89	6.70	32.7	7.79	10.93
8.	C.I:	7.15	7.73	32.8	8.53	11.35
9.	S.A.	6.76	7.26	32.7	7.94	11.63
10.	S.E.	6.88	7.47	33.1	8.65	11.85
11.	P.A.	6.56	7.85	31.9	8.23	10.84
12.	B.A.	6.34	7.35	32.6	8.12	11.22
Arithmetic mean		6.75	7.408	32.333	8.189	11.203
Standard deviation		0.443	0.363	0.686	0.277	0.472
Coefficient of variation (%)		6.575	4.906	2.123	3.393	4.213

Table no. 2. The results obtained by the control group at the final test

No.	Surname First name Initials	<i>Dribbling on a straight line 20 meters away (seconds)</i>	<i>Dribbling through milestone 20 meters apart (seconds)</i>	<i>The Square movement (seconds)</i>	<i>Goal throw, preceded by 10 meters dribbling (seconds)</i>	<i>Dribbling, passing and shooting at the goal (seconds)</i>
1.	C.R.	6.12	7.12	30.4	8.21	9.34
2.	O.V.	6.64	7.23	31.3	7.56	10.22
3.	C.S.	6.34	7.33	31.2	7.23	10.44
4.	L.O	6.34	6.78	31.0	7.43	10.32
5.	D.S	6.12	6.56	31.0	7.65	9.89
6.	D.A	5.45	6.21	30.8	7.94	9.79
7.	L.P	6.02	6.0	31.5	6.94	10.04
8.	C.I:	6.34	6.76	31.4	7.65	10.44
9.	S.A.	6.21	6.55	31.5	7.11	11.15
10.	S.E.	6.23	6.88	32.0	8.43	10.21
11.	P.A.	6.11	7.03	31.0	7.23	10.11
12.	B.A.	5.87	7.00	31.6	7.44	10.37
Arithmetic		6.149	6.787	31.225	7.568	10.193

mean					
Standard deviation	0.293	0.401	0.420	0.444	0.436
Coefficient of variation (%)	4.771	5.919	1.345	5.875	4.284

Table no. 3. The results obtained at the initial testing in the experiment group

No.	Surname First name Initials	<i>Dribbling on a straight line 20 meters away (seconds)</i>	<i>Dribbling through milestones 20 meters apart (seconds)</i>	<i>The Square movement (seconds)</i>	<i>Goal throw, preceded by 10 meters dribbling (seconds)</i>	<i>Dribbling, passing and shooting at the goal (seconds)</i>
1.	O.D.	6.36	7.23	31.4	8.43	10.32
2.	R.I.	7.46	7.16	32.4	8.75	10.89
3.	P.T.	6.87	7.75	32.4	7.73	11.32
4.	D.S.	7.32	7.64	32.7	7.50	11.27
5.	D.E.	6.85	7.66	32.5	8.43	10.75
6.	C.N.	6.32	6.98	31.9	7.94	10.82
7.	C.A.	6.78	6.89	32.2	7.59	10.84
8.	D.E.	7.32	7.64	32.4	7.89	11.32
9.	L.O.	6.44	7.24	32.2	7.44	11.21
10.	S.J.	6.78	7.74	32.7	8.12	11.56
11.	M.C.	6.65	7.55	31.8	7.87	10.78
12.	C.R.	6.47	7.26	32.7	8.11	11.54
Arithmetic mean		6.801	7.395	32.275	7.983	11.051
Standard deviation		0.389	0.303	0.402	0.403	0.373
Coefficient of variation		5.727	4.100	1.247	5.056	3.383

(%)					
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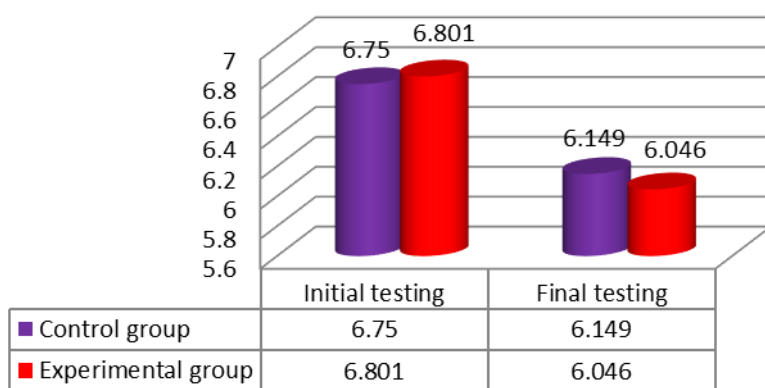
Table no.4. The results obtained by the experimental group at the final testing

No.	Surname First name Initials	<i>Dribbling on a straight line 20 meters away (seconds)</i>	<i>Dribbling through milestones 20 meters apart (seconds)</i>	<i>The Square movement (seconds)</i>	<i>Goal throw, preceded by 10 meters dribbling (seconds)</i>	<i>Dribbling, passing and shooting at the goal (seconds)</i>
1.	O.D.	5.89	6.34	30.2	7.54	9.75
2.	R.I.	6.13	6.64	31.2	7.98	9.02
3.	P.T.	6.03	6.23	30.6	6.54	10.13
4.	D.S.	6.36	6.12	30.4	6.89	9.74
5.	D.E.	5.87	6.03	30.1	7.21	9.64
6.	C.N.	5.67	6.07	29.8	6.74	10.02
7.	C.A.	6.21	6.21	30.4	6.76	9.87
8.	D.E.	6.00	6.04	31.1	7.21	10.52
9.	L.O.	5.76	6.34	30.2	6.73	10.11
10.	S.J.	6.30	6.26	30.7	7.11	10.24
11.	M.C.	6.22	6.18	30.8	6.75	9.78
12.	C.R.	6.12	6.34	31.2	7.34	10.40
Arithmetic mean		6.046	6.233	30.558	7.066	9.935
Standard deviation		0.216	0.171	0.456	0.415	0.399
Coefficient of variation (%)		3.573	2.744	1.492	5.879	4.017

The arithmetic mean for the control group, at the initial evaluation, was 6.75 seconds, and at the final one 6.149 seconds. In the experimental group the arithmetic mean at the initial evaluation was 6.801, and at the final one by 6.046 seconds. We can see a progress made by both groups, more especially in the experimental group indicated by the improvement of the sample execution time (graph 1)

Graph no.1 The values of the arithmetic mean of the two groups in the Dribbling sample on a straight line over a distance of 20

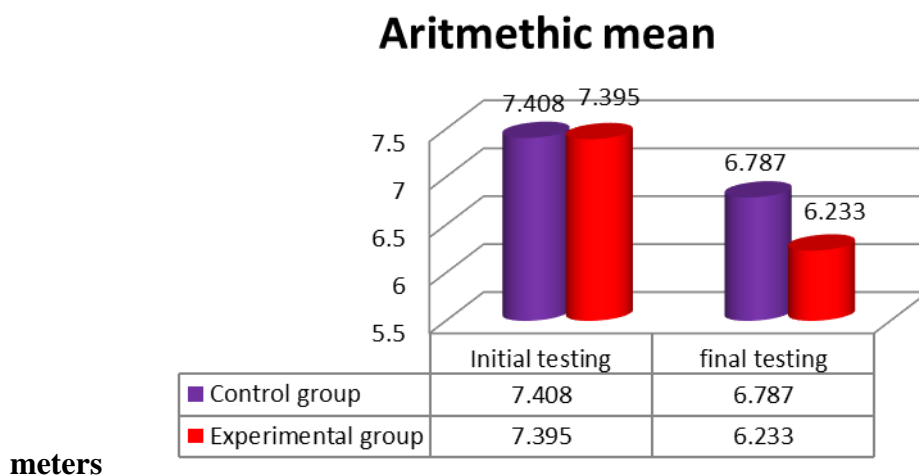
Aritmethic mean



meters

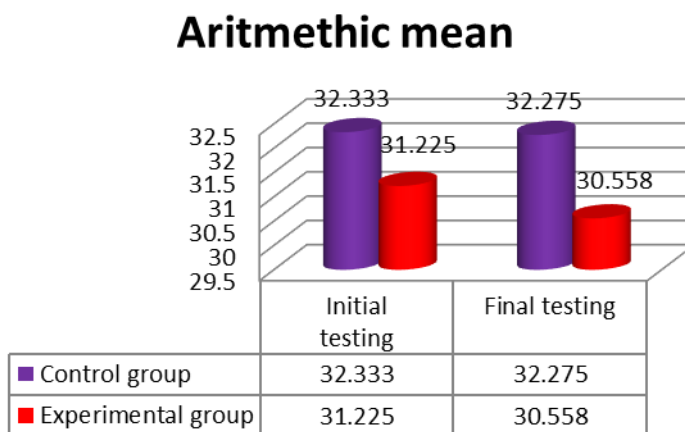
In the dribbling test among milestones 20 meters apart, the arithmetic mean for the control group was at the initial evaluation of 7.408 seconds, and at the final evaluation of 6.787 seconds. In the experimental group at the initial evaluation, the arithmetic mean was 7.395 seconds, and at the final one, 6.233seconds. The obtained values show the progress of both groups, especially of the experimental group, the execution time of the test improving on average by about 1 second (graph 2).

Chart no.2. The values of the arithmetic mean of the two groups at the Dribling test among milestones with a distance of 20

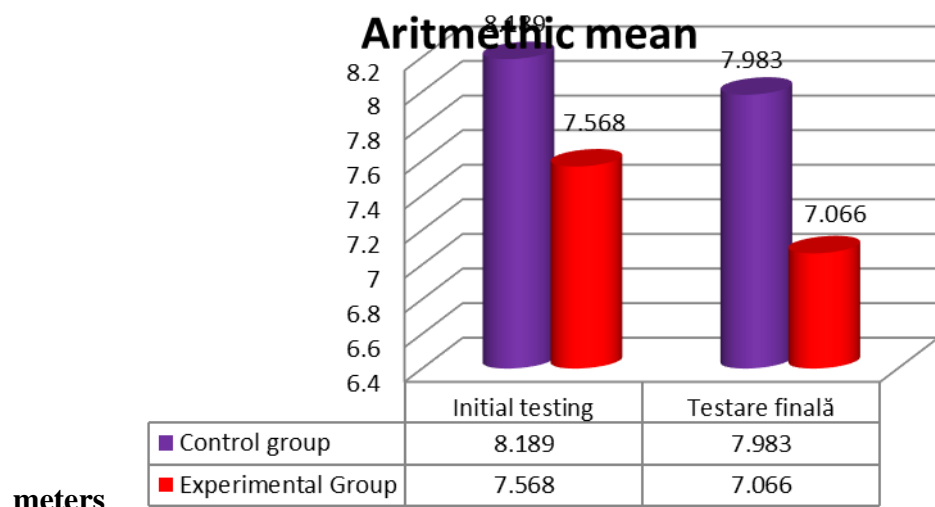


The arithmetic mean for the square movement, in the control group in the case of the initial evaluation, was 32.333 seconds, while in the final one it was 32.275, a very small difference between the two tests. The experimental group had 31,225 seconds at the initial test and 30,558 seconds at the final one. In this test, the progress of the experimental group is greater than that of the control group (graph 3).

Chart no.3. The values of the arithmetic mean of the two groups at the square movement



Graph no.4. The values of the arithmetic mean of the two groups at the throwing at the goal, preceded by a dribbling distance of 10

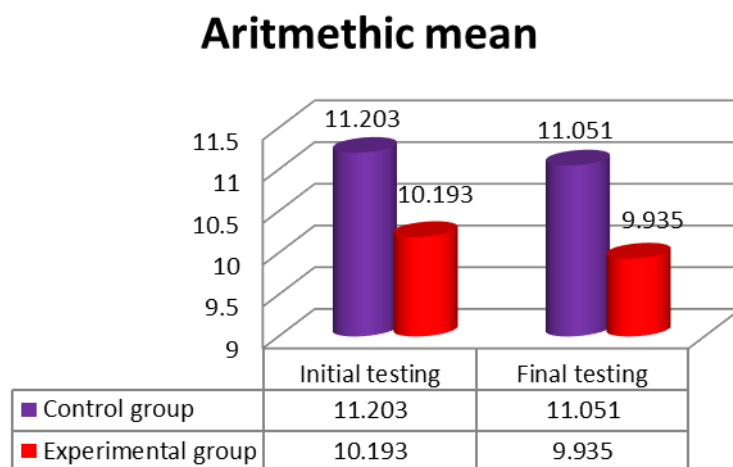


meters

In graph no. 4 are presented the values of the arithmetic mean for the throwing at the goal preceded by dribbling over the distance of 10 meters, namely the control group at the initial evaluation had 8.189 seconds, and at the final one 7.983 seconds, and the experimental group had at the initial evaluation 7.568 seconds, and to the final 7,066 seconds. In the case of this test, we can also observe a progress of the groups, being greater in the case of the experimental group.

At the dribbling, passing and throwing at the goal the arithmetic mean at the initial testing was in the control group of 11.203 seconds and in the experimental group 11.051 seconds. At the final test, the control group had an arithmetic mean of 10.193 seconds, and the experiment group 9.935 seconds. Progress is observed in both groups (Graph 5).

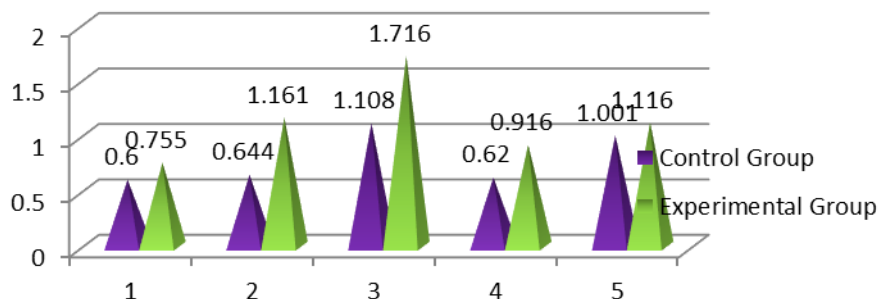
Graph no. 5. The values of the arithmetic mean of the two groups at the Dribbling, passing and throwing at the



goal

An evolution of the results (the differences between the tests) in the control tests is summarized in Graph 6.

Graph 6. The values of the arithmetic mean regarding the differences obtained by the two groups



1. *Dribbling on a straight line 20 meters away*
2. *Dribbling through milestones 20 meters apart*
3. *The Square movement*
4. *Goal throw, preceded by 10 meters dribbling*
5. *Dribbling, passing and shooting at the goal*

In the dribbling test in a straight line 20 meters apart, the control group obtained an improvement of the time by 0.6 seconds, while the experimental group obtained 0.75 seconds, with a greater improvement of the time in the experimental group, with 0.15 seconds.

In the dribbling among milestones 20 meters apart, the average of the control group was 0.64 seconds, and in the experimental group of 1.16 seconds, identifying a difference of 0.5 seconds.

At the square movement, the mean of the control group was 1.108 seconds, and in the experimental group of 1.716, seconds, also observing here a difference of about 0.6 seconds.

At the goal throw test, preceded by 10 meters dribbling, the control group had an average of 0.62 seconds, while that of the experiment of 0.916 seconds, found a difference of 0.3 seconds between the two groups.

In the dribbling, passes and shooting at the goal , the average of the control group was 1 second, and that of the experimental group 1.1 seconds. Here the difference is the minimum of 0.1 seconds, the results being a close value.

Following the presentation and analysis of the results I can say that there is progress in both groups, more important in the experimental group.

Conclusions

Following the actual experiment, the collection of information, the analysis of the obtained data and the comparison of results, we have stated the following conclusions:

✓ Through the means used in the physical education lessons, I was able to identify the improvement of the values obtained from the evaluations. The execution times for each test were improved, in both groups, but the experiment group obtained better values between the two assessments.

✓ The hypothesis has been confirmed namely that learning the motor skills specific to the handball game can be optimized if new and attractive means are used for students. Greater differences were obtained in the experimental group than in the control group with an average of about 1.7 seconds.

✓ The tests used were aimed at highlighting the specific skills of the handball game, as demonstrated by interpreting the results and presenting them.

✓ At this age, one cannot speak of a too big difference in the enrichment of the specific luggage of a specific sporting game, but it is possible to observe a better skill in the case of the girls, of help in handling the ball and higher speed and force, among boys, needed in movement and contact with the opponent.

✓ In order to obtain favorable results for the learning and consolidation of the motor skills specific to a sports game, the training must be carried out constantly and continuously, without too many interruptions. From this point of view I can say that there are setbacks in the case of schools, especially in rural areas, due to the lack of sports base. Being played only when the weather conditions are favorable, there are quite long breaks in the teaching process. These lead to losses, of a motor nature (forget certain elements) and of a temporal nature (time is lost from the following period because it is necessary to insist on regaining lost knowledge).

✓ I can say that even in the case of secondary school students, learning through play, relay races in which the competitiveness appears, has more grip on the students than the individual performing of some technical elements.

✓ I intend in the future to look more closely at the teaching process and to focus on the feedback received from the students and to keep them interested in physical education as well as training for school teams.

There is possible that some of the participants at this research to be selected to practice handball at performance level where the motrical and physical capacity and also the efficiency are very important; a good preparation during physical education lessons could be useful [5,7,8,9,10,11].

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