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SKILL DEVELOPMENT USING FOOTBALL SPECIFIC METHODS AND TESTS FOR 10-12 - YEAR-OLD CHILDREN

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ABSTRACT. The team's conception has evolved over time according to the new requirements of the game. In the overall evolution of the game factors and of the game itself, in the course of the permanent changes of orientation and accent, the physical training was an element of progress for the other factors of the training. Some important elements of physical training are strength, speed, skill and mobility.

Keywords: *means, methods, skill, abilities, technique*

REZUMAT. ***Dezvoltarea îndemânării prin metode şi teste specifice jocului de fotbal la copiii de 10-12 ani.*** Concepţia de joc a echipelor a evoluat de-a lungul timpului în funcţie de noile cerinţe ale jocului. În ansamblul evoluţiei factorilor de joc, a jocului însuşi, în cadrul permanentelor schimbări de orientare şi accent, pregătirea fizică a reprezentat un element de progres pentru ceilalţi factori ai antrenamentului. Un element de structură foarte important al pregătirii fizice este reprezentat de calităţile motrice forţa, viteza, rezistenţa, îndemânarea şi mobilitatea.

Cuvinte-cheie: *mijloace, metode, îndemânare, abilităţi, tehnică*

Introduction

Among these elements, this paper aims to analyse the skill generally, but also is focusing on the football game. The topicality of the paper lies in the fact that it is in line with the concerns of optimizing the lesson of physical education in all its aspects, including the development of motor skills. Especially as a form of expression, skill is the "quality that allows us to coordinate complicated

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movements and assures the rapid acquisition of skills and their improvement, as well as their use according to requirements and adaptation to various situations." (Hirtz, 2004) From other authors' perspective, skill is "the man's ability to perform acts and actions with a superior degree of coordination in terms of efficiency and with minimal energy and nervous consumption." (Dragomir&Scarlat, 2004)

The practical value of the paper is that it demonstrates the efficiency of some drives for skill development, and highlights the effectiveness of skill development in the physical education lesson. By the specifics of the used methods / objects, football play contributes to achieving the goals of physical education and sports, but for the harmonious physical development of the students are also necessary means of gymnastics and athletics (Neța, Popovici&Popovici, 2010).

Due to Matveev & Novicov (1980), skill is defined "first of all as an ability to quickly acquire new movements and secondly as an ability to quickly restructure the driving activity according to circumstances that change sharply." The ball and ball less methods of football have a wide applicability in the development of skill both in the physical education lesson and in the training lessons in other sports. Reciprocity between the means of physical education and sport is revealed by the contribution to the formation of a sports education by the first ones and the introduction of the technical procedures in sport into the system of the means of physical education.

The EWMN method was chosen because of its ability to create complex and simultaneous motion sequences that characterize exercise. EWMN is the work of Prof. Noa Eshkol in collaboration with Prof. Abraham Wachmann of Israel, published in 1958. EWMN is a scoring method that proposes a system of symbols representing the basic values describing human movements in time and space.

The method starts from the premise that physical phenomena of the movement can be analysed and translated into symbols within a concise system of well-defined symbols (Eshkol & Wachmann, 1958). The Matorin test consists in making separation of the body with its rotation in the air, after a jump, in the direction chosen by the subject. The size of the rotation is measured in degrees, as shown in Figure 1.

The test is carried out by tracing a line of 35 m on the ground, oriented in the north-south direction, the subject stand with the soles of each side of this line. It is required that the subject does not lose balance during the test, land in approximately the same place and position as the starting point.

The practice of playing football in other sports disciplines, and reciprocal training of footballers with means from other sports branches, reinforces the idea that for the complex training of a sportsman only the means of that discipline are not sufficient.

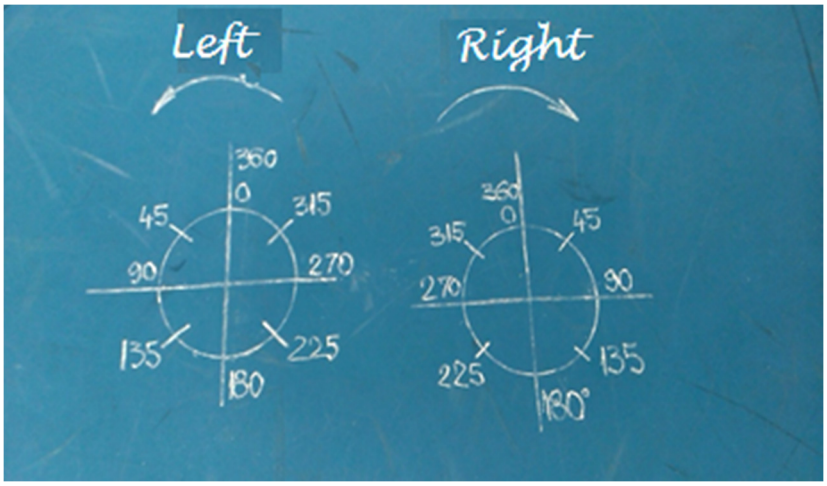

Figure 1. Measuring scale Matorin test

Hypothesis

Starting from the premise that motor skills development approached by the modern methods and specific means of the football game can lead to an efficiency increase in the instructive-educational process, confirmed by greater manifestation indices of the motoring qualities.

An experimental study must confirm or invalidate the fact that students who systematically practice football in physical education classes, extracurricular activities and school sports competitions have higher morphological-functional developmental indices and better physical and motor development.

The aim of the paper is to develop the specific driving skill in the football game during the class of physical education and sport at the 5th grade.

Objectives

Carrying out a theoretical analysis of the motor skills: skill and specific aspects of skill in football game.

- Developing drive systems designed to increase skill specific to football game.
- Practical reasoning of the skill development of: skill.

Means and methods

1. Study of bibliography, observation method, experimental study, graphic method

Experiment: Subjects who participated in this research were 20 pupils of the fifth grade in the school year 2015-2016 at the secondary school Ion Agârbiceanu Alba Iulia. The 20 subjects were then distributed in two groups, one being the experimental group and the other the control group.

Table 1. Results of Test Group Subjects on Test I-Matorin Test (Initial Test)

No.	First Name and First Name	Jump to the left (degrees)	Jump to the right (degrees)
1.	A.E.	270	270
2.	B.C.	270	270
3.	B.S.	360	315
4.	B.B.	270	315
5.	B.D.	225	270
6.	C.G.	315	315
7.	C.C.	270	315
8.	C.P.	270	270
9.	F.T.	315	270
10.	G.E.	315	315

Table 2. Results of Witness Group Tests on Test I – Matorin Test (Initial Testing)

No.	Last Name and First Name	Jump to the left (degrees)	Jump to the right (degrees)
1.	M.D.	270	315
2.	M.R.A.	315	315
3.	N.D.	315	270
4.	M.R.	270	270
5.	M.I.	270	315
6.	P.A.	270	315
7.	R.S.	270	315
8.	S.F.	270	360
9.	S.A.	270	360
10.	U.R.	180	315

The results obtained in the initial testing of the three applied tests confirm this assumption, the differences being insignificant in the analysed indicators, as can be seen from the centralizing tables presented below.

Table 3. Matorin test statistics (left)

Matorin Test (jumping on the left)								
Group	**X**	**S**	**m**	**Cv**	**Student**		**ANOVA**	
					t	P	F	P
Experi-mental	269.5	32.789	10.366	12.164	0.189	>0.05	1.458	>0.05
Control	267	25.733	8.137	9.638				

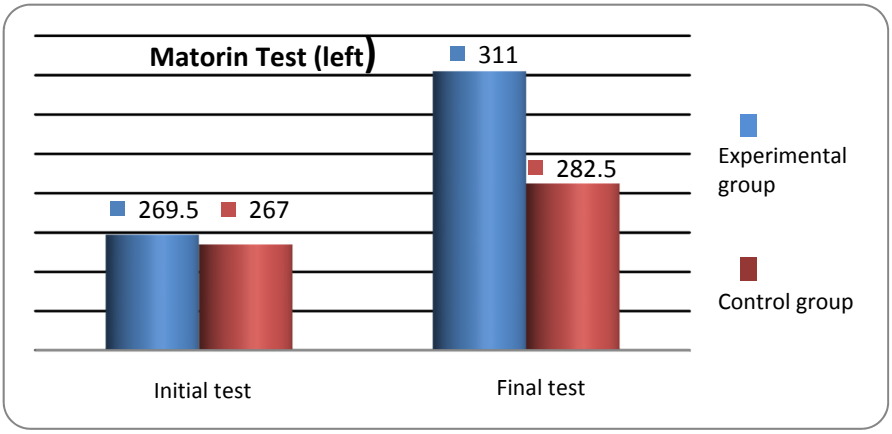

Figure 2. Matorin Test (left) - Average values for the two tests

Table 4. Statistical indexes from Matorin test (right)

Matorin Test (jump to the right)								
Group	**X**	**S**	**m**	**Cv**	**Student**		**ANOVA**	
					t	P	F	P
Experi-mental	272	23.944	7.571	8.803	0.670	>0.05	1.987	>0.05
Control	264	29.135	9.213	11.036				

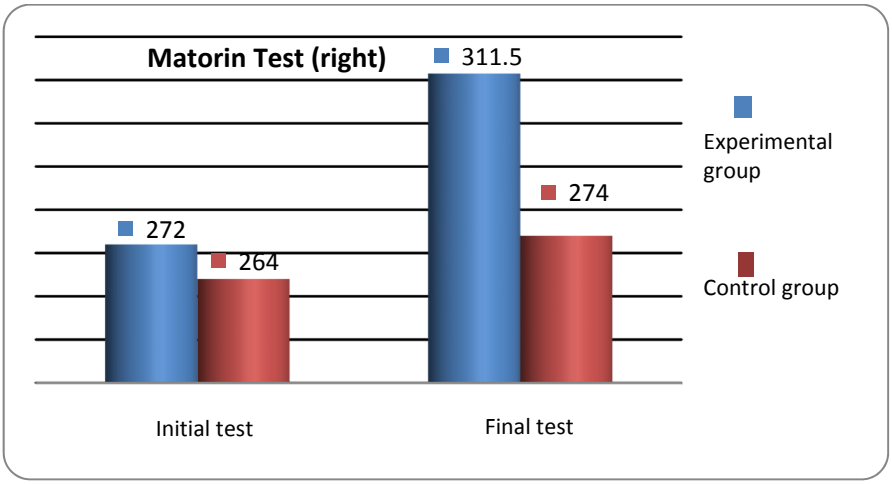

Figure 3. Matorin Test (right) - Average values for the two tests

Table 5. Results of Expert Group Test Group I Test - Matorin Test (final test)

No.	First name and last name	Jumping with turning to the left side (degrees)	Jumping with turning to the right side (degrees)
1.	A.E.	315	270
2.	B.C.	270	315
3.	B.S.	360	345
4.	B.B.	315	315
5.	B.D.	270	315
6.	C.G.	345	315
7.	C.C.	315	315
8.	C.P.	315	315
9.	F.T.	345	315
10.	G.E.	345	315

Table 6. Results of Witness Group Test Group I Test - Matorin Test (Final Test)

No.	First name and last name	Jumping with turning to the left side (degrees)	Jumping with turning to the right side (degrees)
1.	M.D.	300	270
2.	M.R.A.	300	315
3.	N.D.	315	270
4.	M.R.	300	300
5.	M.I.	315	315
6.	P.A.	270	345

No.	First name and last name	Jumping with turning to the left side (degrees)	Jumping with turning to the right side (degrees)
7.	R.S.	315	315
8.	S.F.	315	360
9.	S.A.	300	360
10.	U.R.	225	315

Due to the natural growth and development of the investigated subjects in both groups that occur between the two performed tests, some somatic, functional enhancements and even a better motricity can be observed. In addition, physical education emphasizes the development process overall and our approach must demonstrate that the applied methodology is effective. We will further demonstrate that the progress rate and its dynamics is significantly different in the experimental group compared to the control group, a fact revealed by the computed statistical indicators for each test and their corresponding diagrams.

For the centralized data in the tables below, we make the following remarks:

- M represents the control group and E the experimental group;
- IT is the initial test, and TF final test;
- Initial-final student is the result of the T test applied to one of the groups for the two tests;
- Final Student is the T test for final testing, applied for both groups;
- t represents the experimentally determined value during the T test;
- F represents the value recorded by the ANOVA method at the final test for the two groups;
- the critical value of F in the Fisher table used with the significance threshold of 0.05 having 1 and 18 degrees of freedom and computed with the FINV () function of the Microsoft Excel software is 4.4138 (F (0.05, 1.18) = 4.4138);
- the critical values of t in the Fisher table used with the significance threshold of 0.05 and computed using the TINV () function in the Microsoft Excel software are presented as follows:
- for initial T-test T = 2.262 for 9 degrees of freedom;
-for final T-test = 2.1009 for 18 degrees of freedom;
- P represents the significance threshold; the one used by us is 0.05.

Table 7. Statistical indices in the Matorin test (left)

Matorin Test (left)											
Group		**X**	**S**	**m**	**Cv**	**Initial-Final Student**		**Student final**		**ANOVA**	
						t	P	t	P	F	P
Experi-mental	Initial test	269.5	32.782	10.366	12.164	5.326	<0.05	2.334	<0.05	5.352	<0.05
	Final test	311	29.79	9.42	9.58						
Control	Initial test	267	25.733	8.137	9.638	2.435	<0.05				
	Final test	282.5	24.54	7.76	8.68						

- mean values show an increase between tests by 41.5 degrees in the experimental group and by 15.5 grades in the control group, significant for both groups:

Experimental group: t(9)=5.326>2.262
Control group: t(9)=2.435>2.262

- the coefficient of variation reveals a higher homogeneity than in the initial testing in both groups, more pronounced in the first one;
- the values of t and F in the final test confirm the significant differences between the two groups:

t(18)=2.334>2.1009
F(1,18)=5.352>4.413

Table 8. Matorin test statistics (right)

Matorin Test (right)											
Group		**X**	**S**	**m**	**Cv**	**Initial-Final Student**		**Final Student**		**ANOVA**	
						t	P	t	P	F	P
Experi-mental	Initial test	272	23.944	7.571	8.803	6.353	<0.05	3.144	<0.05	7.379	<0.05
	Final test	311.5	24.72	7.81	7.93						
Control	Initial test	264	29.135	9.213	11.036	2.143	>0.05				
	Final test	274	28.48	9.01	10.39						

- the mean values show an increase of 39.5 degrees in the experimental group and only 10 degrees in the control group, significant only for the first group, also evidenced by the Meaning tests:

Experimental group: $t(9)=6.353>2.262$
Control group: $t(9)=2.143<2.262$

- the coefficients of variation show very good values, with a slight improvement over the values from initial testings

- the values of t and F at the final testing confirms the significant differences between the two groups:

$t(18)=3.144>2.1009$
$F(1,18)=7.379>4.413$

Analytical Graphic Representation - Matorin Test
(shows the differences between the two tests held in October and May)

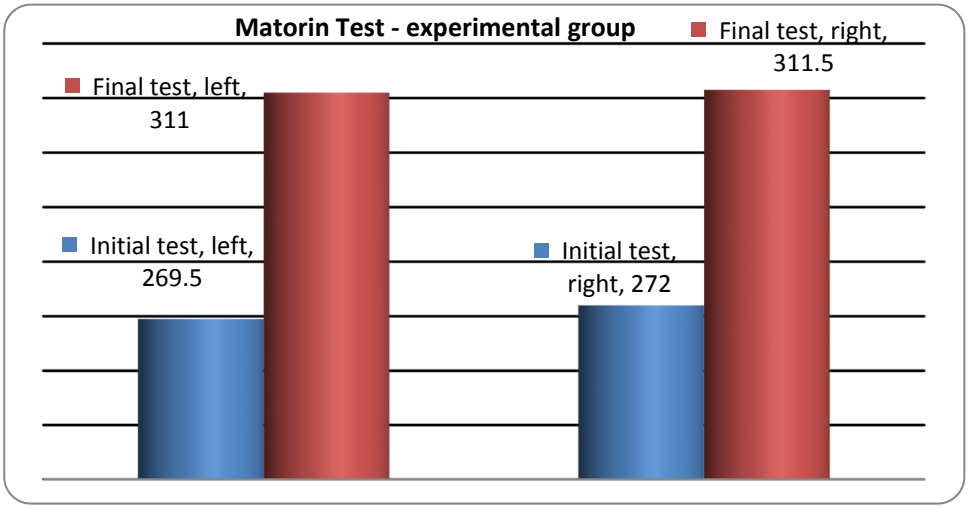

Figure 4. Matorin-group experiment-average values in the two tests

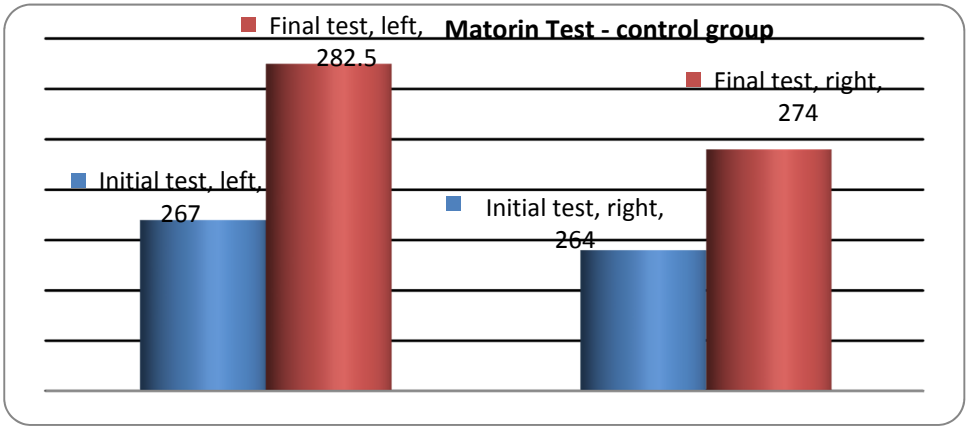

Figure 5. Matorin-control group test-average values for the two test

Table 9. Results of Group Experiment Test-II Test Applicants (Initial Testing)

No.	First name and last name	Test result (seconds)
1.	A.E.	16,4
2.	B.C.	16,8
3.	B.S.	14,4
4.	B.B.	13,8
5.	B.D.	14,9
6.	C.G.	14,1
7.	C.C.	15,3
8.	C.P.	16,2
9.	F.T.	14,3
10.	G.E.	14,6

Table 10. Results of Witness Test Subjects on Test II – Applicable Route (Initial Testing)

No.	First name and last name	Test result (seconds)
1.	M.D.	14,5
2.	M.R.A.	15,3
3.	N.D.	14,8
4.	M.R.	13,9
5.	M.I.	16,5
6.	P.A.	15,7
7.	R.S.	15,8
8.	S.F.	13,8
9.	S.A.	16,1
10.	U.R.	16,3

Table 11. Statistical Tables in Test II (Initial Testing)

Applicative course								
Group	**X**	**S**	**m**	**Cv**	**Student**		**ANOVA**	
					t	P	F	P
Experimental	15.08	3.312	1.047	21.962	0.137	>0.05	1.563	>0.05
Control	15.27	2.86	0.904	18.729				

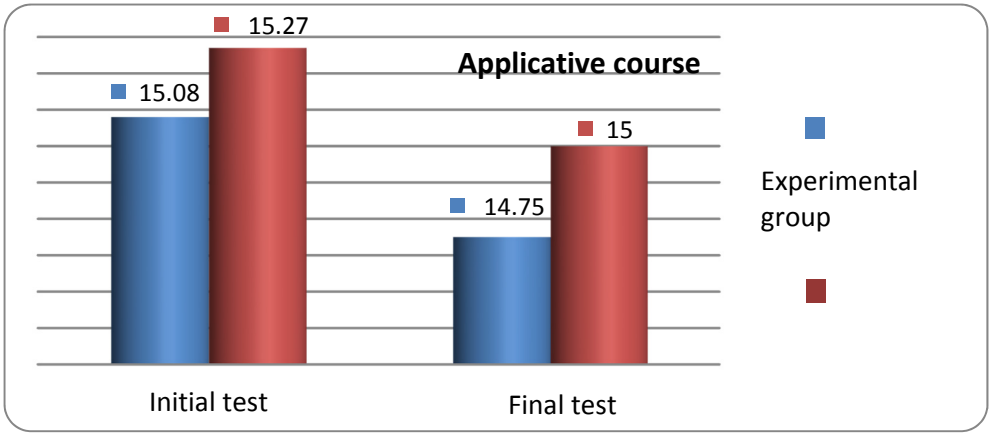

Figure 6. Application course - Average values for the two tests

Table 12. Results of Expert Group on Test II-Application Run (Final Test)

No.	First name and last name	Test result (seconds)
1.	A.E.	16,1
2.	B.C.	16,5
3.	B.S.	14,1
4.	B.B.	13,2
5.	B.D.	14,7
6.	C.G.	13,8
7.	C.C.	15,1
8.	C.P.	15,9
9.	F.T.	13,8
10.	G.E.	14,3

Table 13. Results of Test Group 2 Test Subjects - Applied Course (Final Test)

No.	First name and last name	Test results (seconds)
1.	M.D.	14,2
2.	M.R.A.	15,1
3.	N.D.	14,6
4.	M.R.	13,6
5.	M.I.	16,3
6.	P.A.	15,4
7.	R.S.	15,5
8.	S.F.	13,4
9.	S.A.	16,1
10.	U.R.	15,8

Table 14. Statistical Tables in Test II (Initial-Final Test)

Application course											
Group		X	S	m	Cv	Student initial		Student final		ANOVA	
						t	P	t	P	F	P
Experi-mintal	Initial test	15.08	3.312	1.047	21.962	2.816	<0.05	3.231	<0.05	5.258	<0.05
	Final test	14.75	3.675	1.162	24.91						
Control	Initial test	15.27	2.86	0.904	18.729	1.869	>0.05				
	Final test	15	3.093	0.978	20.62						

The average values indicate a few seconds improvement of the values recorded between the tests at both groups, significant improvement only for the experimental group:

Experiment group: t(9)=6.353>2.262
Control group: t(9)=2.143<2.262

- Homogeneity improves in both groups, more significant in the control group.

-The significant differences between the two groups from the final testing are highlighted by the values of t and F:

T (18)=3.231>2.1009
F(1,18)=5.258>4.413

Analytical Graphical Representation - Applicative Course
(shows the difference between the two tests held in October and May)

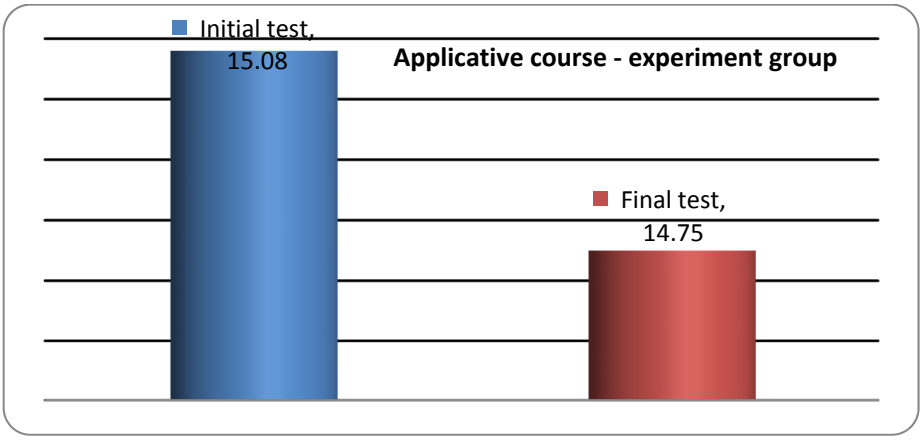

Figure 7. Application-experiment group-average values for the two tests

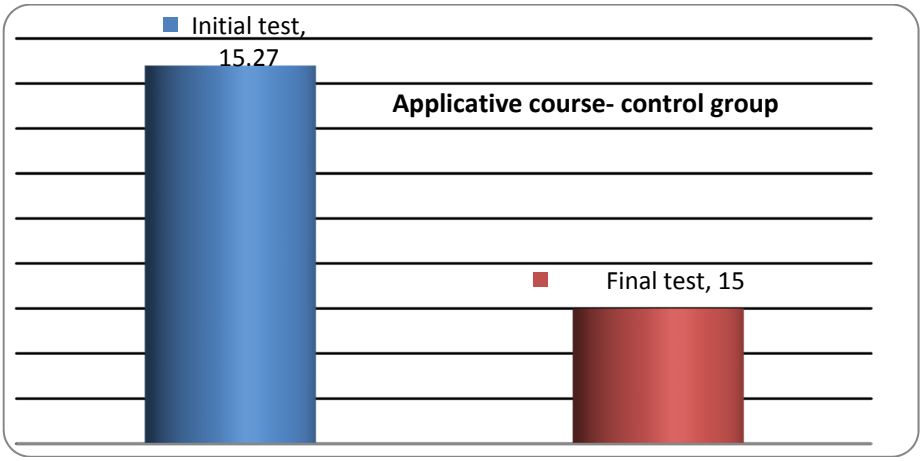

Figure 7. Application run-control group-average values for the two tests

Conclusion and suggestions

Following the elaboration and systematization of the materials presented in this paper, the authors reached out to the next conclusions:

• Starting from the fact that football is a means of physical education, it is considered that within the physical education classes the age-appropriate football exercises can be used to achieve the goals of better motor skills and abilities;

By applying the tests, it was found an increase in general physical development indices.

Due to the morpho-functional particularities of the 10-12 year old students referred to in the present paper, it can be said that our proposal is an appropriate one for the development of motor abilities and especially of the skill.

• The somatic development level determines the necessary time period for the acquisition of the technical procedures that contribute to the development of the skill.

• After viewing the tables and graphs, we can observe an increase in the values obtained by the two test groups between the initial and the final testing.

• The progress of the experimental group compared to the control group is significant, allowing the authors to say that for the optimization of skill, the specific means of football can successfully replace the classic ones.

• By raising the fitness level of the two groups of students included in the proposed experiment, the authors consider that the research objectives have been achieved, the efficiency of the applied methodological system has been demonstrated.

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