STUDIA UBB EDUCATIO ARTIS GYMN., LXII, 3, 2017, pp. 27 - 36
(RECOMMENDED CITATION)
DOI:10.24193/subbeag.62(3).22

A STUDY CONCERNING THE DEVELOPMENT OF SPEED THROUGH THE USE OF DYNAMIC GAMES IN FOOTBALL, JUNIORS OF 14 TO 15 YEARS OLD

RADU ADRIAN ROZSNYAI[1]*, DAN MONEA[1], PAUL OVIDIU RADU[1]

ABSTRACT. The authors of this paper have attempted to find an optimum ratio between the actual training and game implementation in the process of multilateral development of the football player**,** emphasizing the development of speed throughout games both specific and nonspecific to football. Due to the fact that the dynamic games create a state of emulation, doubled with a high energy consumption, they also have an educational and multilateral formative influence on children, especially if they are correctly selected and conducted, so as to satisfy the children's variety of interests and development needs. Therefore, it is highly recommended the alternative use of games in sports training (Epuran, 2001). In this study, the authors have intended to show that through certain ways, methodical procedures and adequate systems of action, all applied differently and collectively in the sports training, games help to develop speed in all its forms. **Objectives**: The aims were to prove that games can help the development of speed and a physical progress can be obtained for football players as a result of applying games in sports training. **Materials and methods:** To properly conduct the experiment, the following materials were used: 2 stopwatches, an object used to signal the start (a starter), stakes and a colourful spray to draw lines. **Conclusions and recommendations:** Introducing games in the sports training brings many advantages in training sports people, the results of speed tests being better and as a result of this, the psychological positive effect on the player's mood is highly enhanced; therefore, our future recommendation is that football coaches and others, should use and implement games when training sportspeople.

Keywords: *dynamic games, football, speed through.*

REZUMAT. ***Studiu privind dezvoltarea vitezei prin utilizarea jocurilor dinamice in fotbal la juniori cu vârsta cuprinsă între 14-15 ani*.** Autorii acestei lucrări vizează găsirea unui raport optim între antrenamentul propriu-zis şi implementarea jocului în procesul de dezvoltare multilaterală a jucătorului de fotbal, punând

[1] Babeş-Bolyai University, Cluj-Napoca, Romania
**Corresponding Author*: radurozsnyai@yahoo.com

accentul pe dezvoltarea vitezei prin jocuri specifice şi nespecifice jocului de fotbal. Datorită faptului că jocurile dinamice creează o stare de emulaţie, dublată de un consum energetic mare şi în acelaşi timp au o influenţă educativă şi formativă multilaterală asupra copiilor dacă sunt corect selecţionate şi dirijate, astfel încât să satisfacă varietatea intereselor şi nevoilor de creştere şi dezvoltare a acestora, se recomandă folosirea alternativă a jocurilor în antrenamentul sportiv (Epuran, 2001). Prin acest studiu autorii şi-au propus să arate că jocul prin anumite modalităţi, procedee metodice şi sisteme de acţionare adecvate, aplicate în mod diferenţiat şi colectiv în antrenament sportiv, ajută la dezvoltarea vitezei sub toate formele ei. **Obiective:** Obiectivele au fost acelea de a demonstra că jocul ajută la dezvoltarea vitezei şi se poate obţine un progres fizic al jucătorilor de fotbal prin aplicarea acestora în antrenamentul sportiv. **Materiale şi metode:** Pentru desfăşurarea experimentului s-au folosit următoarele materiale: 2 cronometre, un obiect pentru declanşarea sunetului la start (starter), jaloane şi un spray colorat pentru a trasa linii. **Concluzii şi recomandări:** Apariţia jocurilor în antrenamentul sportiv aduce un plus în pregătirea sportivilor, rezultatele probelor specifice vitezei fiind mai bune, iar prin valenţa lor, jocurile au şi un efect psihic pozitiv asupra stării de spirit al jucătorului; recomandăm ca pe viitor, antrenorii de fotbal, şi nu numai, să implementeze jocul în pregătirea sportivilor.

Cuvinte cheie: *jocuri dinamice, fotbal, dezvoltarea vitezei*

Introduction

Together with the development of new sports training techniques, better results come into view. In order to obtain performance, it is very important to start training from an early age. If the athlete starts training from the age of 6 or, then he / she will be easily influenced in his / her training. When 14-15 years old, the athlete needs to be involved also through more and more innovative training means and methods. At the beginning, one may be attracted towards performance as a result of training in an unknown environment. Regardless of age, the training methods must be as modern, as efficient and as attractive as possible, so as to attract the sportsperson's attention in order to obtain and improve performance (Dragnea, 1999).

The dynamic games create an emulation state, doubled with a high energy consumption and, at the same time, they also have an educational and multilateral formative influence on children. If they are correctly selected and conducted, games satisfy the sportspeople's variety of interests and development needs. Therefore, it is highly recommended the alternative use of games in sports training (Epuran, 2001).

Aspects concerning dynamic games

Games are an important means not only for physical education, but also for the athlete's intellectual, moral and aesthetic education. Throughout games, the athlete learns to obey rules, to be tidy and disciplined. When organised in groups, games contribute to development of friendship and cohesion among sportspeople, but also to building team spirit and devotion (Prodea, 2010).

The content of games must conform to the children's anatomical, physiological and psychic particularities. When choosing games, we have also taken into account the children's physical training, and the possibilities of the group we were working with (Prodea, 2010).

Through their content, the dynamic games are extremely varied, due to the specific movements they actually involve, such the ones related to basis-walking, running, jumping, crawling, throwing, etc. The movements are meant to exercise different types of muscles, although some are able to develop other types of motrical qualities, such as speed in particular (Chiriţă, 1983).

Hypothesis

Approaching dynamic games offers multiple training possibilities, consolidation of basic motricity skills, as well as skills specific to various sports branches, enhancing at the same time the development of motricity skills and the moral-volitional features (Prodea, 2010).

Objectives

A first objective is that of demonstrating throughout an experiment that a physical progress can be obtained with football players by involving dynamic games in the sports training, games specific for speed development.

The second, is that of demonstrating that, through certain methodical ways, procedures and adequate systems of action applied differently and collectively, speed development will be enhanced in all its forms.

The subjects of the research

The subjects of the research are children, football players: 10 players from the football club "Best Junior" from Cluj Napoca and 10 players from „Industria Sârmei Câmpia-Turzii" („I.S.C.T.") football club from Câmpia-Turzii.

The evaluation trials take place in two stages: initial and final testing. The same subjects are assessed in the final trials, after applying games in their sports training. The trainings of "Best Junior" team took place twice a week every three weeks and the 25 games were repeated twice.

Materials and methods

The research consists in testing the 20 athletes of 14 -15 years old, divided into two teams of ten in two stages. In the first stage, an initial assessment of the players takes place at the beginning of the competitional year. At the end of the competitional year, a second assessment stage takes place. Throughout the competitional year (between the initial and the final assessment), one of the teams will be involved in dynamic games specific for the development of speed in their weekly training.

The following materials were used in this research:

Fig. 1. Stopwatch (bbymotors, 2017)

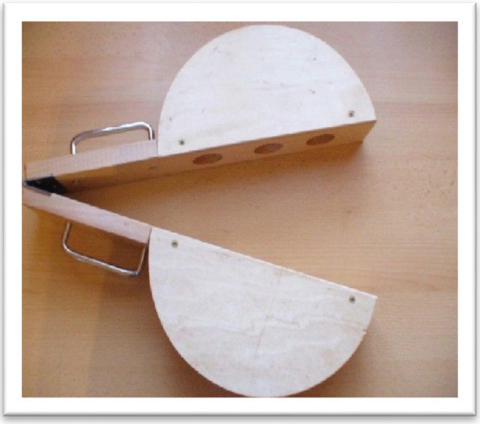

Fig. 2. Starter (prosportequipment, 2017)

Fig. 3. Stakes (mold-didactica, 2017)

Fig. 4. Spray (seawavesonline, 2017)

- Two stopwatches to measure time for athletes trials;
- A starter (an object used to signal the start) so as to make the start as efficiently and as correctly as possible;
- Stakes to enclosure the working space;
- A coloured spray to define the lines on the ground (the strating and the finishing lines).

Systems of action:

Table 1. Systems of action

No of game	Name of the game	Week
	Initial testing	1
1.	"Small bouquets"	2/17
2.	"The coloured corners"	2/17
3.	"The coloured heads"	3/18
4.	"Tic Tac Toe""	3/18
5.	"The baskets' transportation"	4/20
6.	"The horse and the carriage"	4/20
7.	"The woodpecker "	5/20
8.	"Run and touch"	5/21
9.	"Pay attention to the number"	6/21
10.	"The labyrinth"	6/22
11.	"The crabs and the shrimps"	7/22
12.	"Tag"	8/23

No of game	Name of the game	Week
13.	"Relay race with return"	8/23
14.	"The mirror"	9/24
15.	"The ducks and the hunters"	9/24
16.	"Conquering the balls"	10/25
17.	"The coloured stick"	10/25
18.	"Do and undo the circle"	11/26
19.	"The clock"	11/26
20.	"Race by numbers"	12/27
21.	"Watch out for the ball!"	12/27
22.	" The bouncing ball"	15/28
23.	"Keep the ball"	15/28
24.	"Touch and run"	16/29
25.	"The fishing net"	16/29
	Final testing	30

Weeks: 1; 30 – testings;
Weeks: 13; 14; 19 – holiday

Results

For the control group (the team that trained in the normal way, withoud games), the following results were registered:

Table 2. Results of the initial testing for "I.S.C.T" team

Testing stages	Commute 4x10m	Speed 50m	Speed 30m
Statistical indicators Arithmetic mean	10,76	7,87	4,46
The standard deviation	0,54	0,41	0,16
The variability coefficient	0,05	0,05	0,04

Table 3. Results of the final testing - "I.S.C.T."

Testing stages	Commute 4x10m	Speed 50m	Speed 30m
Statistical indicators Arithmetic mean	10,59	7,66	4,26
The standard deviation	0,46	0,45	0,13
The variability coefficient	0,04	0,06	0,03

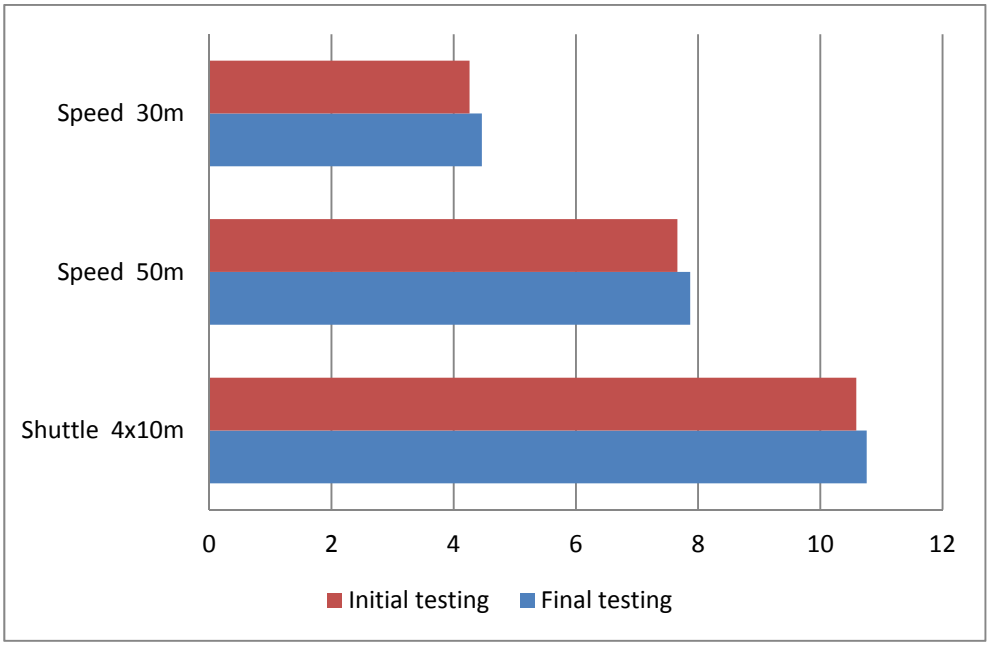

Figure 1. Comparison between the arithmetic means of the initial and final testing

By comparing the initial and the final testing in the above chart, we can see an improvement for all three trials, of 0,17 seconds for the commute trial; 0,21 seconds for the speed 50 m trial; 0,20 sec for the speed 30 m trial .

For the experimental group (which used dynamic games when training) the following results were registered:

Table 4. Results of the initial testing - "Best Junior" team

Testing stages	**Commute 4x10m**	**Speed 50m**	**Speed 30m**
Statistical indicators Arithmetic mean	10,77	7,70	4,41
The standard deviation	0,63	0,38	0,12
The variability coefficient	0,06	0,05	0,03

Table 5. Results of the final testing - "Best Junior" team

Testing stages	Commute 4x10m	Speed 50m	Speed 30m
Statistical indicators Arithmetic mean	10,41	7,24	4,09
The standard deviation	0,51	0,22	0,07
The variability coefficient	0,05	0,03	0,02

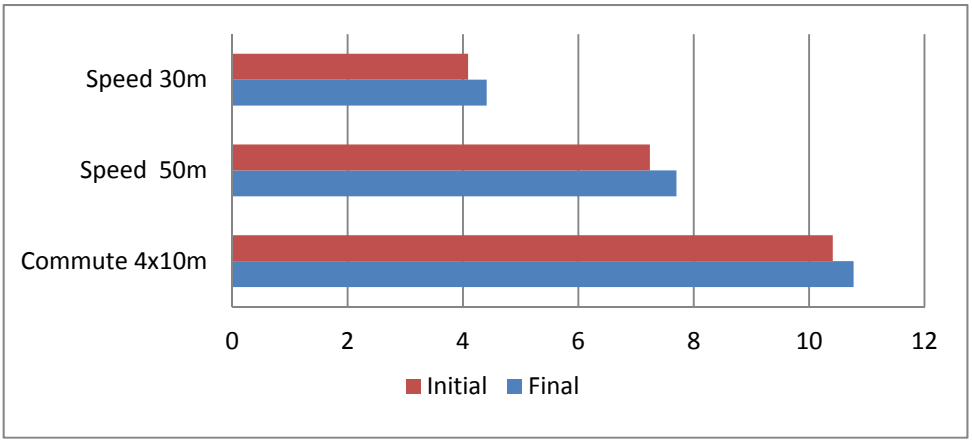

Figure 2. Comparison between the arithmetic means of the initial and final testing for "Best Team" juniors

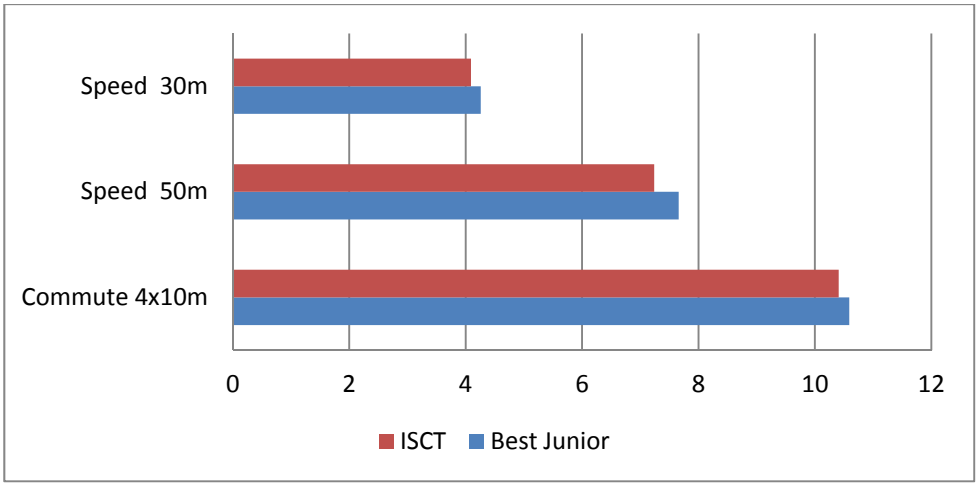

Figure 3. Comparisons between "I.S.C.T." team and the "Best Junior" team

From the above figure, we can see a better result for speed at the final trials, in comparison with the initial ones. Thus, we have an improvement 0,36 sec for commute, as a result of comparing the arithmetic means of the initial and the final testing. For the other trials, we have had an improvement of 0,46 seconds for speed 50 m and of 0,32 seconds for speed 30 m.

The figure number 3 illustrates a visible higher progress of the "Best Junior" team which has been trained by using dynamic games, in comparison with the ISCT team. The differences were the following: 0,18 sec.; 0,42 sec. and 0,17 sec. for commute 4x10 m, speed 50 m, and speed 30 m.

Conclusions

As a result of processing and interpreting the results of the experiment, we can draw some concussions related to the use of the dynamic games in developing speed.

The hypothesis from which we have started has been confirmed and one can notice the positive effects of games in trails specific for speed and also the psychic positive effect on the player's mood.

We have demonstrated experimentally that by using specific dynamic games for speed enhancement, one can achieve a physical progress determined by the development of this motrical quality as a result of unspecific methods that is throughout games. The values registered by the "Best Junior" team, which has been trained via games, were higher than those registered by the "ISCT" team, for which games haven't been used.

As a result of this research, we consider that we have successfully deepened the knowledge of the chosen topic and that, the experiment can very well serve as a guide for football coaches in their activity with the players.

REFERENCES

Bbymotors. (2017). Retrieved from *www.bbymotors.ro/cronometru.html*
Chirita, G. (1983). *Educaţie prin jocuri de mişcare.* Bucureşti: Editura Sport-Turism.

Dragnea, A. (1996). *Antrenamentul sportiv - teorie și metodică.* Bucureşti: Editura Didactică și Pedagogică.

Epuran, M. (2001). *Mecanisme de influențare a comportamentului în fotbal.* București: Editura Sport-Turism.

Mold-didactics. (2017). Retrieved from *http://mold-didactica.com.md/produs/jaloane-pentru-marcaj/*

Prodea, C. (2010). *Educație fizică prin joc - suport de curs.* Cluj-Napoca.

Prosport. (2017). Retrieved from *http://prosportequipament.ro/magazin/starter/*

Seawaves. (2017). Retrieved from *http://www.seawavesonline.com/index.php?route=product/*