

**THE INFLUENCE OF DEVELOPMENT OF COORDINATIVE
CAPACITIES UPON TECHNICAL AND TACTICAL
POTENTIAL OF RUGBY PLAYERS OF 16-17 YEARS OLD**

BRAGARENCO Nicolae¹

*¹State University of Physical Education and Sport, Chişinău,
Republic of Moldova*

Keywords: coordinative capacity, technical and tactical potential, training programs, rugby.

Abstract: This article reflects experimental argumentation regarding the development of coordinative capacities upon the technical and tactical training of rugby junior players. According to assumption regarding the use of ways of development of coordinative capacities of junior rugby players within sport training will influence their technical and tactical potential, it was developed the programs of training for athletes of 16-17 years old which includes specific methods for development of coordinative capacities. This program was suggested to experimental group, while the group pursued traditional training. The both of the groups were checked at the beginning and the end of pedagogical experiment of 5 technical and tactical indices, those results being arranged in a mathematical and statistical way and showed in a tabular way. Analyzing the final results, we can conclude that was confirmed the assumption made at the beginning of research, thing that improved all the technical and tactical indices through the implementation of ways of coordinative capacities in the training process of junior rugby players of 16-17 years old.

Introduction: In general, the activities of physical training and sport, the training of junior players is one of the already decided branches, both for sport in general and as for sport as performance. The sport training of junior players is a complex problem with more specific aspects. The talented athletes must have an instructive and educative process applicable to their real possibilities.

The rugby performance according to specialist [1,4], requires an intensive work in order to resist in front of hard efforts, of whom realization involves a maximal concentration of all physical, moral, volitional and intellectual capacities. As for ways of coordinative capacities the methods, ways of appreciation of athletes appear in

existential things with analyzed experiments , usually having a psycho-physiological approach. [5,6,7,8]

In the play of rugby the branch of literature didn't give much attention to coordinative capacities and didn't do any researches regarding the assimilation and improvement of important qualities and of indices of technical training, through the light of development of this complex capacity.

From mentions above we can conclude that theory and methods of rugby have a great actuality the researches regarding the efficiency of training of athletes through the development of coordinative capacities within specialized training.

From the mentions above it was formed the assumption of the research, according to which the use of coordinative capacities of junior rugby players within sport training will influence their technical and tactical potential.

The methodology and organization of research.

The goal of this work consists of the development of technical and tactical potential of rugby players in their training process based on the improvement of coordinative capacities.

The objects of the research: the analysis and synthesis of branch of literature regarding the training of junior players; the appreciation of technical and tactical of rugby of junior rugby players of 16-17 years old; the determination of sport training of junior rugby players of 16-17 years by using the means of coordinative capacities upon the technical and tactical level of rugby players of 16-17 years old.

In order to accomplish these objectives, it was involved methods of investigation being in a strong affinity during the research; the analysis of scientific and methodic literature, testing of technical and tactical training, pedagogical experiment, mathematical and statistical methods, tabular and graphic method.

The organization of the research. The research consists of 3 steps:

First step – involved the following activities: the analysis of literature, developed during the research; pedagogical observation which was achieved during the experiment.

Second step- consisted of an ascertaining experiment, with participation of 2 groups. All of the athletes were tested of 5 technical and tactical indicators [2].

Third step- involved the organization of the basic experiment were participated 2 groups (SSSRAR – Blumarine – experimental group (n =20), and UTM CHISINAU – bystander group (n=18).

It was established *the annual program of training* [3], in accordance with competitive calendar available when developing pedagogical experiment. For elaborating the annual program it was formulated framework objectives specifically to age and level of training: *the optimization of morphological and functional indices, the development of abilities, improvement of technical and tactical procedures, the consolidation and improvement of tactical, individual, and collective actions, offensive and defensive, as well as the participation at competition and achievement of objectives.*

Within the planning of annual mesostructure of training, the instructive objectives were determined according to their function, for example for training mesocycle were précised the following objective: the amelioration of effort capacity, the development of muscle strength; the amelioration of individual technique with accent on development of coordinative capacities; the amelioration of tactical individual and of group activities; the amelioration of mental concentration.

The goal of this research was the increase of technical and tactical potential by the development of coordinative capacities within individualized training, all the planning documents were made in order to carry out the stabilized objective.

The means for development of tactical and technical potential in terms of coordinative capacity within microcycle were distributed hereby: within de developed trainings during Monday and Friday- those concerning the development of coordinative capacities plus those appropriate for technical and tactical and individual training; during Tuesday and Thursday, each week braced with the development of motive activities; during Wednesday and Saturday braced with exercises of force ways.

The evaluation results of technical and tactical level of rugby players of 16-17 years old of the groups involved in the pedagogical experiment are presented in table 1 and figures 1-5.

Chart 1. The level of training of rugby players of 16-17 years (n=38)

N Cr	Control rules	Gr	Initial testing	Final testing	T	P
1	Side step and jumped step (sec)	E	4,85 ± 0,06	4,64 ± 0,06	4,31	<0,001
		M	4,79 ± 0,23	4,71 ± 0,04	2,16	<0,05
			t = 0,71 P > 0,05	t = 0,97 P > 0,05		
2	The step ground (sec)	E	8,47 ± 0,18	7,69 ± 0,14	5,75	<0,001
		M	8,39 ± 0,18	8,17 ± 0,19	1,69	>0,05
			t = 0,31 P > 0,05	t = 2,06 P < 0,05		
3	Change of direction (sec)	E	6,3 ± 0,21	5,73 ± 0,09	3,58	<0,01
		M	6,34 ± 0,11	6,11 ± 0,12	2,78	<0,05
			t = 0,17 P > 0,05	t = 2,52 P > 0,05		
4	Technical-tactical direction (sec)	E	22,99 ± 0,21	22,14 ± 0,18	5,42	<0,001
		M	23,14 ± 0,25	22,78 ± 0,15	2,13	<0,05
			t = 0,47 P > 0,05	t = 2,72 P < 0,01		
5	Change of direction, a grazing kick and collection (sec)	E	5,51 ± 0,13	4,97 ± 0,13	5,28	<0,001
		M	5,56 ± 0,09	5,31 ± 0,14	2,68	<0,05
			t = 0,31 P > 0,05	t = 1,82 P > 0,05		

NOTE : “ t ” was calculated between the initial and final indices of every groups;
“t1”- was calculated between the initial indicators of experimental and second groups;
“t2”- was calculated between the final indicators of experimental and bystander groups;
“p”- it is from Fisher’s chart on significance limit of 0,001 or 0,05, according to researched echelon.

The analysis of results

Side step and jumped step. The experimental group went from a average of 4,85 sec value and reached the 4,64 average finally, with an increased rate of 0,21 sec. The bystander group registered an average of 4,79 at initial testing and 4,71 at final testing, the rate of growth being 0,08 sec. (Figure 1).

The value of “t” (4,31) of experimental group is bigger than value of “p” from Fisher’s chart, as what means a significant growth, the same we notice in the value of “t” of bystander group (2,16) with a smaller growth, the value sits under the “p”.

The value of “t 1” (0,71) is smaller than value of “P”, it indicates the difference between the initial tests of both groups are insignificant. We can notice on final testing the value of “ t2”

(0,97) is slightly increasing at the experimental group, compared with bystander one, where the growth is insignificant, placed under the “P” value.

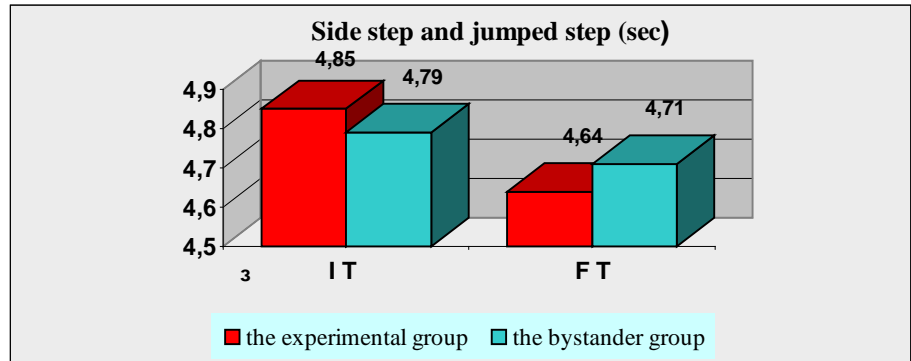


Fig.1 The dynamic of technical testing “side step and jumped step”

The step ground. On the initial testing the average values of the experimental group are 8,47 sec, and 7,69 on final testing, while the bystander group has 8,39 sec (initial) and 8,17 sec (final).

The student’s criterion has different values, we notice a precious growth on significance (5,75) over P value of experimental group, while bystander group (1,69) represents an insignificant growth, as well as under “P” value (Figure 2).

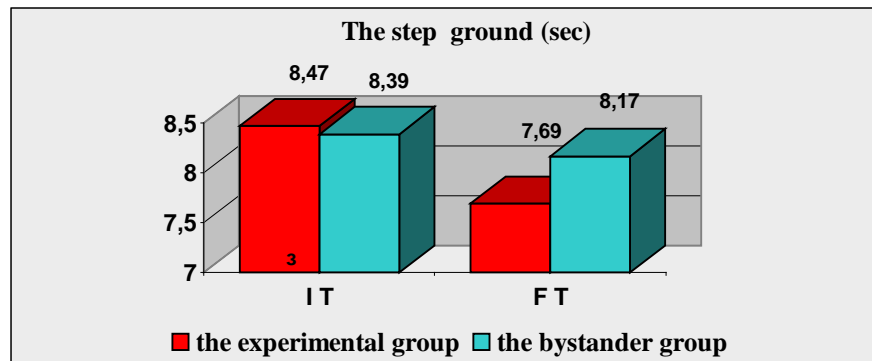


Fig. 2 The dynamic of technical testing “the step ground”

The small value of “t1” (0,31) shows the difference between the initial testing of those two groups aren’t significant, compared of those final, where “t2” (2,06) certifies values over “P”.

Change of direction. The experimental group went from an average value of 6,3 sec and arrived to an average value of 5,73 sec, the rate of growth being of 0,57 sec, while the bystander group went from an average value of 6,33 sec and arrived to an average value of 6,11 sec with a growth of 0,22 sec (Figure 3).

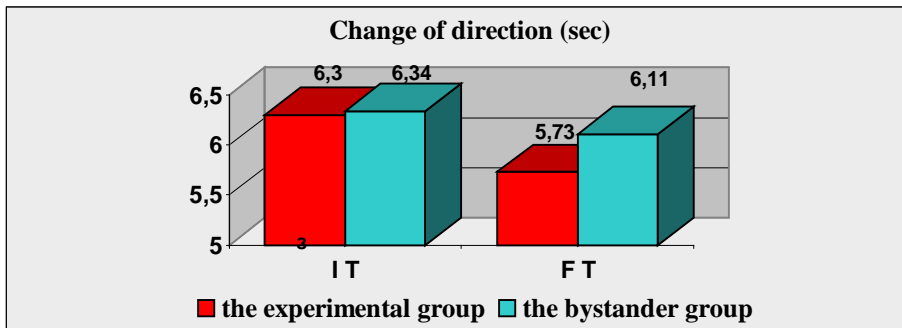


Fig.3 The dynamic of technical testing “ change of direction”.

The student’s criterion indicates a value of 3,58 in the experimental group, it means is bigger than the value of “P” from Fisher’s chart and proves a significant growth for this group. In bystander group the value of “t” (2,78) is smaller than the experimental group, which is higher of “P” value.

The value of “t1” (0,17), indicates that the results of initial testing of participant groups on experiment are very closed and is smaller than value of “P” fro Fisher’s chart .” t2” (2,52) proves a significant difference between the registered results on final testing of the experimental and bystander group, $P < 0,05$.

The technical-tactical direction.

After the testing results , the obtained average of values from the experimental group at the initial testing were 22, 99 sec, but on final testing 22,14 sec, the rate of growth being 0,85sec, while bystander group obtained initial values of 23,14 sec and final 22,78 sec, the rate of growth being 0,36. The significant growth of the experimental group’s level is reinforced even in “T”’s value (5,42) which is bigger than “P” ’s value. The value of “t” in bystander group (2,13), although is smaller beats the “P” ‘s value.(Figure 4).

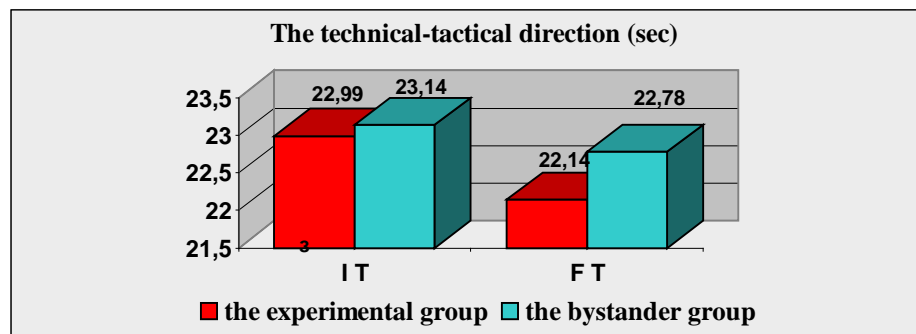


Fig.4 The dynamic of technical testing “ the technical –tactical direction”

“t1” shows a value of 0,47 smaller than “P” ‘s value on initial testing, value “t2” is sufficiently bigger – 2,72, reporting a significant difference between the registered indices of those final testing, in favour of the experimental group.

Change of direction, a grazing kick and collection.

The average values obtained by the experimental group are 5,51 sec on initial testing and of 4,97 sec on final testing, while bystander group has average values of 5,56 sec on initial testing and 5,36 on final testing (Figure 5).

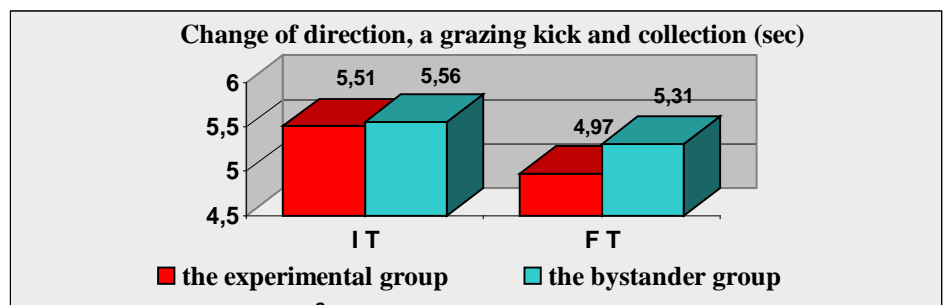


Fig. 5.1 Change of direction, a grazing kick and collection

The student’s criterion has a value of 5,28 for experimental group and of 2,68 for bystander group, which represents a significant growth for both researching groups, with a growth rate bigger for experimental one.

The “t1” ‘ s value , on initial testing as on other technical-tactical samples, is insignificant: 0,31.

A smaller value of “ t2”, on final testing than “ P” ‘s from Fisher’ chart reflects an insignificant difference of results.

Conclusions.

After analysing the results on formatively experiment in where the experimental program was applied on increasing the technical-tactical potential, through the implementation of development's resources of coordinative capabilities, we can ascertain the following:

- The planning documents of instructive process of junior rugby-players are formed of the same characteristic principles of all sport's games. To emphasize the development of coordinative capabilities of junior rugby-players, the resources of development will be selected for every training lesson, in addition of proposed goals.
- Analysing the level of technical-tactical training of the teams involved in pedagogical experiment, it can be noted on final testing a clear accession of tendency on obtained results. All five registered indices on final testing, for both examined groups, the value of "t" is bigger than limit significance ($P < 0,05$) on all samples, exception "step ground" on bystander group, which sits under "P" 's values; the differences between two groups on final testing are significant at three of five technical-tactical samples (the step ground, change of direction, the technical-tactical direction) and insignificant of two of them (side step and jumped step and change of direction, grazing kick and collection), because these are more difficult from a point of view of execution.
- All these results leads on establishing that the submitted assumption was certified at the beginning of research, actually allowed the improvement of technical-tactical potential of experimental group through the implementation of the development of coordinative capabilities of resources during the training process of juniors rugby-players of 16-17 years old.

Bibliography:

- [1] Badea D., (2003). Rugby, strategia formativă a jucătorului, București, FEST, 2003, 170 p.
- [2] Bragarenco N. (2012). Aprecierea nivelului pregătirii tehnico-tactice a rugbiștilor juniori de 16-17 ani din Moldova, Conferința științifică internațională a doctoranzilor "Cultura fizică: probleme științifice ale învățământului și sportului", p.19-22.
- [3] Bragarenco N., Gorașcenco A. (2014) Programarea antrenamentului sportiv pentru dezvoltarea capacităților coordinative ale rugbiștilor de 16

– 17 ani. Materialele conferinței științifice internaționale consacrate zilei mondiale a calității Chișinău: Editura USEFS, 14- 15 noiembrie 2014, p.108

[4] Constantin V. (2004). Rugby, tehnica și tactica. București, FEST, 350 p.

[5] Dragnea A., Mate-Teodorescu S. (2002). Teoria sportului, București, FEST, p.100-250.

[6] Rață G., Rață B.(2006) Aptitudinile în activitatea motrică, Bacău, EduSoft, 318p.

[7] Лях В.И. (1989). Координационные способности школьников, Минск: Полыня, с. 159-160.

[8] Платонов В.Н. (1997) Общая теория подготовки спортсменов в олимпийском спорте, Олимпийская литература, Киев, с. 300-312.

INFLUENȚA DEZVOLTĂRII CAPACITĂȚILOR COORDINATIVE ASUPRA POTENȚIALULUI TEHNICO - TACTIC AL RUGBIȘTILOR DE 16 - 17 ANI

Cuvinte-cheie: capacități coordinative, potențial tehnico-tactic, programă de pregătire, rugby.

Adnotare: Acest articol reflectă argumentarea experimentală a influenței dezvoltării capacităților coordinative asupra nivelului pregătirii tehnico-tactice a rugbiștilor juniori în procesul de antrenament. Pornind de la ipoteza că utilizarea mijloacelor dezvoltare a capacităților coordinative ale rugbiștilor juniori în cadrul antrenamentului sportiv va influența asupra potențialului tehnico - tactic al acestora, a fost elaborată programa de pregătire pentru sportivii de 16 - 17 ani, care include metode și mijloace specifice dezvoltării capacităților coordinative. Această programă a fost propusă grupei experimentale, în timp ce grupa martor a urmat antrenamentul tradițional. Ambele grupe au fost testate la începutul și sfârșitul experimentului pedagogic la 5 indici tehnico-tactici, datele fiind prelucrate matematico – statistic și prezentate în forma tabelară și grafică. Analizând rezultatele testării finale, putem constata că ipoteza înaintată la începutul cercetărilor a fost confirmată, fapt ce a permis îmbunătățirea tuturor indicilor tehnico - tactici prin implementarea mijloacelor de dezvoltare a capacităților coordinative în procesul de pregătire a rugbiștilor juniori de 16 - 17 ani.