

# ANALYSIS OF THE DYNAMICS OF THE GAME ACTIONS OF SENIOR RUGBY PLAYERS BASED ON THE APPLICATION OF AID

Vasile TĂBÎRȚĂ<sup>1</sup>

**Abstract:** *In this article is addressed the current problem regarding the analysis of the game actions of the performance rugby players based on the application of aids for the development of force-speed capacity in the game of rugby. Any official match at a different level is subject to analysis of the game actions performed by the team members during each match. Following the conduct of the pedagogical experiment, both the experimental and the control teams were subjected to such analysis in order to assess the effectiveness of the game in general and some players, or game lines in particular.*

**Key words:** *senior rugby players, force-speed, game actions, performance, motor training, playing station, assistive devices.*

## 1. Introduction

One of the key moments in the preparation of rugby players at any level is the methodologically correct application of all specific means in order to increase the level of their sports training [1], [2], [5], [6], [7], [9].

A relatively new direction in motor training, including sports games, is the application of assistive devices, which in recent years are increasingly used at all stages of sports training [2], [3], [4], [5], [8]. This, to a large extent, also concerns the game of rugby, which has found its amateurs at large national level at all levels.

According to research carried out by specialists in the field [1], [2], [6]. Most of the work emphasizes the technical-tactical and functional motor training of athletes.

At the same time, motor training is often the deciding factor in a match or tournament as a whole. Quite a lot of work relates to the force-speed training of rugby players, where according to the literature data [2], [3], [4], [5], almost eighty percent of all game actions are according to its content elements and processes of this type.

---

<sup>1</sup>PhD, associate professor, *State University of Physical Education and Sport, Republic of Moldova.*

## 2. Game Actions and Points Entry

All game actions were grouped into a few blocks, depending on their structure and content. Thus, the first block was that of actions of the players who scored points to the opponent, these being: points scored, attempts, penalty kicks and drop-goals. This is also where the actual playing time of each team participating in the match was calculated (Table 1).

Thus, according to Table 1 in the recording of the marked points it was

found that at the beginning of the pedagogical experiment, both groups scored an average approximately equal, this being in the experimental group equal to 27 points scored, and the control group - 24 points.

At the end of the experiment, we see a more highlighted increase in the experimental group, the result being 32 points scored and 25 points in the control group.

Table 1

*Game actions related to points entry*

No	Game actions	TUM I. T.	TUM F.T.	„Blumarine” I.T.	„Blumarine” F.T.
1	Points	24	25	27	32
2	Attempts	4,8	5,0	5,3	6,1
3	Penalty kicks	5,7	6,1	5,8	6,8
4	Drop-goal	0,1	0,1	0,1	0,2
5	Game Effecttime	29	30	30	34

Regarding the number of tests, the initial test shows that in the experimental group it is 5.3 and the control group is 4.8 tests, which tells us about the homogeneity of both groups included in the pedagogical experiment. In the final tests, there was a clear increase in the number of tests in the experimental group, which was 6.1 tests, as opposed to the control group, which has a number of only 5.0 tests.

Following the recording of the number of penalty kicks, as a result of which points were scored, we see a homogeneity of the groups at the beginning of the experiment, where the experimental group had 5.8 successful hits on the average and the control group 5.7. In the final tests, there was a more obvious increase in the experimental group with

6.8 and the control group with a number of 6.1 strokes.

Regarding drop-goal strikes, we see an approximately even percentage in both groups at the beginning of the experiment with an average of 0.1 drop-goals in both groups. At the end of the experiment there was a small increase in the experimental group alone being 0.2 drop-goals, as opposed to the control group, which recorded, as at the beginning of the experiment only 0.1 drop-goals.

In the actual playing time timer it was found that at the initial test for the two groups it is approximately equal to 30 min in the experimental group and 29 min – control group. In the case of the final timer in the control group there was an effective playing time of 30 min, and in the experimental group - 34 min.

Therefore, in the actions related to the entry of points in the official matches in both groups at the beginning of the pedagogical experiment the results were approximately equal, which confirms once again their homogeneity, that at the end of the experiment the results of the experimental group, in most cases, are superior to almost most of the indicators tested. This allows us to state that the experimental methodology applied has been shown to be quite effective in most cases under analysis.

The next block under analysis was balloon actions, which relate to actions carried out in the field. The basic element of the technique of playing ball rugby is the pass of the ball with your hands. At the same time, other technical elements should not be neglected, such as shots, edge play, heap game, and so on (Table 2).

The balloon bird with your hands is the starting point for other technical elements related to the execution with your hands such as wearing, taking over, passing, moles, etc.

*Ball action*

Table 2

<b>No</b>	<b>Game actions</b>	<b>TUM I.T.</b>	<b>TUM F.T.</b>	<b>„Blumarine” I.T.</b>	<b>„Blumarine” F.T.</b>
1	Passing	158	162	161	189
2	Agglomerations	81	84	88	96
3	Shots	48	52	59	54
4	Edges	43	45	43	49
5	Piles	36	33	34	28
6	Penalties	39	36	37	30
7	Force-speed actions	404	412	422	436

Following the recording of the actions after, the preparation period in the proposed experiment, the dynamics of the game actions evolved considerably compared to the initial testing in the two groups, especially in the experimental one, the progress being evident compared to the control group.

In the initial testing of the number of passes, we observe an average of 161 in the experimental group and 158 in the control group. The final test shows an increase in passes in the experimental group with an average of 189 and an average of 162 passes in the control group.

Regarding the number of agglomerations, the initial test shows us in the experimental group a number of 88 agglomerations, and in the control group

the average being 81. The final test shows a clear increase in the number of agglomerations in the experimental group, which is 96, and in the control group - an average lower than the experimental group, which is 84 agglomerations.

In the case of the initial shooting inception, there is not much difference between the experimental group (59 shots) and the control group (48 shots), but following the final enumeration there is an obvious improvement in the experimental group with an average of 54, and in the control group with a lower weight being equal to 52 shots.

Analyzing the average number of margins at initial testing, we see a homogeneity of both groups in both cases being equal to 43 edges. The end of the

pedagogical experiment registered a significant increase in both groups, but more expressive lye is in the experimental group with 49 and in the control group with an average of 45.

The same orderly scrums are a fairly common game action in the game of rugby and how it will be played in it, it depends a lot on the outcome of the match. Thus, in the piles ordered at the initial test, the average result was 34 in the experimental group and 36 in the control group. In the case of final testing we see an improvement in the average number of ordered piles, which are decreasing, where the experimental group recorded a number of 33 piles, and in the control group- 28.

Another indicator investigated in the experiment was the number of penalties in an official match. Following the recording of the average number of penalties at the beginning of the experiment in the experimental group, a number of 37 was recorded, and in the control group-39.

In the final test there was an improvement in both groups, but more evident in the experimental group, being 30 and less pronounced in the control group being 36.

According to Table 2 we note that in all force-speed actions presented and

researched there is a relative similarity within the two groups (experimental and control) at the initial test, where the number of game actions are between 422- experimental group and 404- control group. In the final testing in both groups this index increased, where the control group was recorded an average of 410 actions, compared to the experimental group which totaled an average of 436 game actions, the increase in the number of actions in the experimental group being evident compared to those of the control group.

Following the research carried out on force-speed training, it was found that the experimental group has made clear progress towards the control group, in terms of force-speed actions, thus finding the effectiveness of the methodology of sports training of senior rugby players, by using the predominant aids in sports training.

### 3. Points scored in Official Matches

Another block under investigation was that of the actions related to the points achieved in the national championship matches by the participating teams, these are: points made from tests, points made from the transformations of penalty kicks, points made from transformations and points made from drop-goal (Table 3).

Table 3

*Points achieved in official matches (%)*

No	GAME ACTIONS	TUM T.I.	TUM T.F.	„Blumarin” T.I.	„Blumarin” T.F.
1	Points made from tests	58	61	63	65
2	Points made from the transition of penalty kicks	23	22	23	24
3	Points made from transformations	18	16	13	11
4	Points made from drug-empty Points made from drug-empty	1	1	1	0

Regarding the block points made from the tests, the initial test shows us an equality of the number of force-speed actions in both groups. Similarly, we see a homogeneity in the number of force-speed actions of the point block achieved at the end of the experiment in both groups, but with a more obvious share of the players in the experimental group, i.e. the players of the RC "Blumarin" team. Thus, at the initial test the points achieved in both groups participating in the experiment were equal to 58% of the points made from the tests, so that at the end of the experiment their number was recorded better in the experimental group, this being equal to 65%, and in the control group with 61%.

Following the evolution of the points made from the transformation of the penalty kicks, as in the previous case, the number of them was approximately equal in both groups – 23% of points achieved. At the end of the experiment, although the number increased a little, it was not so

significant, reaching 24% of points scored in the experimental group, and in the control group their number even decreased by a point reaching 22% of points scored.

It does not differ much and the dynamics of the points entered from the transformations, where at the beginning of the pedagogical experiment it was 13% in the experimental group and 18% in the control group, that at the end of the year the results are 11% and 16% scored by the above mentioned method.

Finally, the last clue in the search edup block of points entry actions was the drop-goal. This way of registering points is quite rare in the game of rugby, especially in performance athletes, for which their number at the beginning of the experiment and at the end of it remained the same, being equal in the environment one achievement at a time.

The next block under investigation was the scoring of points in a match for attacking players and defenders (Table 4).

Table 4

*Attempts scored by players on game posts (%)*

No	GAME ACTIONS	TUM I.T.	TUM F.T.	„Blumarin” I.T.	„Blumarin” F.T.
1	Attempts scored by 3/4 players	68	66	69	64
2	Attempts scored by attacking players	32	34	31	36

It is clear that in general the attacking players scored much more compared to the defending players, resulting for the simple reason that the role of the strikers is to score points, whereas the 3/4 players have the function of defending his goal. Thus, by analyzing the average number of tests scored by 3/4 players, we observe at the beginning of the experiment in the experimental group a result of 69% of marked tests, and in the control group –

68%. At the end of the experiment, the experimental group recorded an average of 64% of tests, and the control group – 66%. Regarding the forward players, there was an average percentage of tests scored at the beginning of the experiment in the experimental group – 31%, in the control group – 32%, so that at the end the average number of tests scored by the forward players was in the experimental group of 34%, and in the control group -36%.

The next block to research was the entry of points from different game situations (Table 5). If we follow the first type of transformations carefully we clearly see that at the beginning of the pedagogical experiment both teams had about the same results recording in the environment 44-46 successful

transformations, as at the end of the uta in the Technical University of Moldova (TUM) team (witness group) this indicator decreases to 43 successes, and in the experimental group it reached 49 successful points, which represents a rather imposing result for the teams in the national division.

Table 5

*Successful points from different situations*

No	GAME ACTIONS	TUM I.T.	TUM F.T.	„Blumarin” I.T.	„Blumarin” F.T.
1	Successful transformations	46	43	44	49
2	Successful penalty kicks	44	47	42	52
3	Successful fallen kicks	6	4	3	5

Approximately the same trend is observed in successful penalty kicks, where at the beginning of the pedagogical experiment both groups included in the experiment showed equal achievements, TUM – 44 blows, and RC "Blumarin" – 42. At the end of the experiment both teams improved their results, but in the experimental group it was much more pronounced reaching the result of 52 successes compared to 47 in the TUM team, i.e. the experimental group.

The third indicator was the sign-up of the points from the fallen kicks. As a rule, these strikes are fewer in matches. Thus in the initial test both groups scored 6 blows so that in the final test the control group

scored 4 shots, and the experimental group 5 succeeded.

Therefore, and in this block subjected to pedagogical analysis, the results in the experimental group differ from those in the control group, where they were superior following the application of the experimental methodology of force-speed training of senior rugby players participating in the National Rugby Championship.

The next block of technical-tactical actions was that of passing by the players included in the pedagogical experiment, these being classified by game positions (Table 6).

Table 6

*Number of passes made in official matches by players on game positions (%)*

No	GAME ACTIONS	TUM I.T.	TUM F.T.	„Blumarin” I.T.	„Blumarin” F.T.
1	Passes made by 3/4 players	44	42	39	37
2	Passes made by midfielders in the pile	37	40	45	40
3	Passes by the forerunners	19	18	16	23

According to the table and the figure above which refers to the number of passes made in a game we note that at the beginning of the experiment in both groups an average number of passes were performed approximately equal, the averages being 44% in the control group and 39% in the experimental group. At the end of the experiment we see that the average number of passes made by 3/4 players decreased in the experimental group from 39% to 37%, and in the control group from 44% to 42%.

In the case of recording the passes made by the midfielders in the pile, we note that in the initial testing in the control group they recorded a result of 37% of passes, so that at the end of the pedagogical experiment to reach the value of 40%. At the end of the pedagogical experiment there is a small decrease in the percentage of passes in the experimental group from 45% to 40%.

In the case of recording the average number of passes made by the players ahead at the end of the experiment, we see a clear increase in the experimental

group from 16% to 23% and a small decrease in the control group from 19% to 18%.

In the case of the researched block, which relates to the percentage of passes made by players of different lines of play, a priority is clearly observed of the players in the experimental group, who recorded higher values in almost all the indicators surveyed. At the same time, players' results are highlighted according to their game positions. Thus, according to the results shown in Table 6, most passes are made by 3/4 players, then the midfielders follow the pile and the fewest passes are left to the attacking players, who in fact, according to their function, are to score points for the team. This requires coaches to look for different ways to increase the number of passes that are going to reach attacking players.

Regarding other possibilities, we see at the end of the experiment a small decrease in both groups compared to the initial test, recording the experimental group 6% versus 9% at the beginning and control 2% vs. 3%.

Table 7

*Other opportunities to score (%)*

No	GAME ACTIONS	TUM I.T.	TUM F.T.	„Blumarin” I.T.	„Blumarin” F.T.
1	Other possibilities	3	2	9	6

Thus, by analysing the set of game actions performed by the performance players in the rugby game, we see a stable trend of improving all the game parameters investigated. The most relevant results were recorded in the case of actions related to the making of passes in an official match. Here, the game actions according to the position of each

line of play are clearly highlighted and some changes can be made in their preparation schedule.

The same trend is observed in successful transformations in different actions, where very clearly players are highlighted on game positions, who perform their functions according to the requirements of the game.

#### 4. Conclusions

- Analyzing the playing actions of the teams involved in the pedagogical experiment, there is a clear trend to increase their number in both teams, but their percentage is much higher in the athletes of the experimental team.
- At the same time, there is a decrease in the number of penalties for players included in the pedagogical experiment, which is more pronounced in the experimental group, where the number decreased from 37 to 30, while in the control group it decreased from 39 to 36.
- Keyly, the indicators related to force-speed actions were also improved, where at the end of the pedagogical experiment in the experimental group increased from 422 to 436 actions, and in the control team from 404 to 412 actions.
- The same trend was observed in ball and ball-free actions, where as in previous cases better results were recorded in athletes in the experimental group.

#### References

1. Badea, D.: *Rugby, the player's formative strategy*. Bucharest. University Publishing House, 2012.
2. Bompa, T.: *Periodization - Training theory and methodology*. Second edition. Bucureşti. Ed. Tana, 2003.
3. Bragarenco, N.: *Development of coordinating capacities: monograph*. Chisinau. "Valinex" SRL, 2017. 120 p.
4. Ciorbă, C.: *Sports games, basic course*. Chisinau. "Valinex", 2007, p. 101-132.
5. Dragnea, A.: *Theory of Physical Education and Sport*. Bucureşti. School Book Publishing House, 2000. 241 p.
6. Platonov, V.N.: *Sports Training Theory*. Moscow, 1984, p.30-60, 84.
7. Raţă, G., Carp, I.: *Principles and teaching methods specific to physical education and sport*. Bacău. Ed. "Alma Mater" 2013. 176 p.
8. Talaghir, L.G., Iconomescu, T.M., Stoica L.: *The Sports Game – a means of developing motor skills in secondary school. A study on strength and endurance*. In: *Revista Romanesca pentru Educatie Multidimensionala*, vol. 10, no.4, p.228-240.
9. Triboi, V., Păcuraru, A.: *The Theory and Methodology of Sports Training*. Iasi. Editura PIM, 2013. 374 p.