

EFFECTIVENESS OF THE APPLICATION OF TACTICAL TRAINING MODELS OF TENNIS PLAYERS IN THE TRADING SHOTS PHASE AND COMPLETION OF THE POINT

F.B. COLIBĂŞANU¹ G. BRANIŞTE²

Abstract: *The university graduates' professional insertion represents an important concern for the beneficiaries of the educational process in the contemporary society. The actuality of the problem increases once with the advantages that the university obtains them by applying mechanisms of evidence of the former students' employability. We have proposed an experimental-practical research, which addresses the problem of the relationship between the educational offer of the university and the labour market, aiming to improve the quality of the educational process by connecting it to social requirements.*

Key words: *employability, labour market, quality of studies, career.*

1. The Actuality of the Research

The important scientific problem solved in the field, aims at a new approach in the tactical training of young tennis players, which must contain in itself basic elements of programming some combinations, systems and complex means, included in the structure of typical training lessons to be based on the knowledge of age peculiarities and the specifics of the technical-tactical development of the ability of young athletes with skills for a certain style of play and which will influence the level of

tactical training and implicitly will make the game more efficient.

In this context, a special place in the training system of young tennis players belongs to tactical training as a declining factor of sports performance [3], [9], [11, 12], [14], [16]. Tactical training is the means by which athletes perceive methods and possible ways to prepare and organize offensive or defensive actions, to meet a goal, to earn points, to achieve a certain performance or to achieve a victory. Because good tactics are a good technique and good physical skills, learning and perfecting a new tactical action will be a very important task. This part of the training

¹ PhD student, *The Technical University of Civil Engineering, Bucharest, Romania.*

² PhD, associate professor, *Head of Theoretical bases of Physical Culture Chair, State University of Physical Education and Sport, Republic of Moldova.*

is included in the annual training plan, which is the basic organizational structure for sports training.

Modeling should be an aid in tennis training; it should greatly facilitate the work of planning and organizing centralized training, for coaches and players who want to move towards high performance. In the opinion of the authors [1, 2, 4, 5, 7, 10] the model must be clear and concise, in order to eliminate the variables of small importance, to be close to one already existing, but individualized for each player. Thus, the model should only include the means of training that are similar to the nature of the competition. Through training based on model, we recommend using training lessons to be composed so that the objectives, methods, and content are similar to a competition.

In this context, we consider as a major objective of our research the elaboration and application in practice of efficient models of tactical training of tennis players aged 13-14, for the alternative game phase and the completion of the point.

1.1. The purpose of the research is to improve the indices of tactical training of junior tennis players based on models developed and applied in the training process.

1.2. The objectives of the research are:

1. elaboration of the tactical training program for junior tennis players, based on the algorithm for applying the tactical elements, combinations and exchanges of blows in the game activity system.
2. research of the content and orientation of the means and methods of tactical training of junior tennis players.

3. research of the factors that determine the development of psychomotor and cognitive skills of young tennis players, as a condition for building the tactical training program / models.

4. experimental argumentation of the effectiveness of the modeling methodology (system) on the indices of tactical training of junior tennis players.

Given the training requirements that refer to the game and from game to training, the modeling aims to implement a tactical system, which is based on the qualities and possibilities of the selected players. Starting from the principle of modeling, the aim was to implement a technical-tactical concept similar to the game of the best players and to model the training of athletes in order to achieve the highest possible performance. Because the modeling is aimed especially at players who work at a high performance level, as well as the national teams of Davis Cup and Fed Cup, we considered that the application of this method of preparing the tactical factor at the level of young tennis players will bring the necessary in obtaining very good results.

In this context, we consider that the ratio of the use in play of the specific technical procedures and the percentage of efficiency factors when hitting the ball finds its use in the different phases of the game, expressed by the impressive moments of the game, namely, triggering, maintaining, or changing, or combining with each action on the ball. The content and level of application of the efficiency factors in hitting the ball in the game are, in the opinion of some technicians [3], [9], [11], [14] the printed direction of the ball, the printed experience of the ball, the printed length ball.

2. Research Methodology and Organization

The study was conducted at “Tennis Club Bucharest”, in the period February 1, 2016 - June 1, 2016 in the pre-competition period, within the annual training cycle. The working sample was represented by two groups of 10 female athletes each, the control group and the experimental group. The female athletes from the control group had normal training, corresponding to the training period in which they are. Those in the experimental group had included in their training, specific homework and exercises for learning and perfecting the tactics of the simple game. Subjects were tested in 4 tactical tests, as follows:

Test 1: Change of direction, player A and player B, play right on the diagonal, three strokes, on the fourth change direction along the line with the right kick, towards the area drawn on the field, a square with a side of 2 m. Player A has 15 attempts; there are successful executions, player B is in a cooperative game relationship (Figure 1).

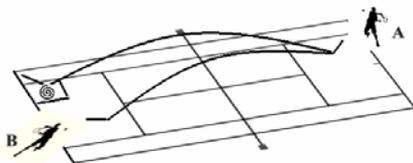


Fig. 1. *Description of Test 1, change of direction with the right shot*

Test 2: Change of direction, player A and player B, play the shot on the left on the diagonal, three shots, on the fourth change the direction along the line with the shot on the left, towards the area drawn on the field, a square with side of 2 m. Player A has 15 attempts, counts successful executions, player B is in a cooperative game relationship (Figure 2).

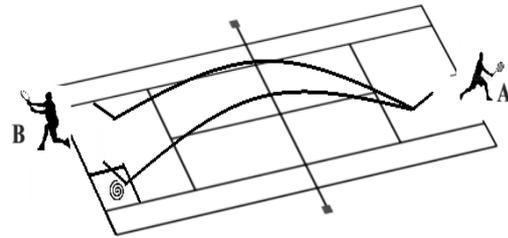


Fig. 2. *Description of Test 2, change direction with backhand smash*

Test 3: completion of the point inside the field of play on the right side, player A serves in the right square, player B returns to the middle of the field, player A advances and executes a right shot placed towards the area drawn on the field, a square with the side of 2m. Player A has 15 attempts, counts the successful executions, player B is in a cooperative game relationship (Figure 3).

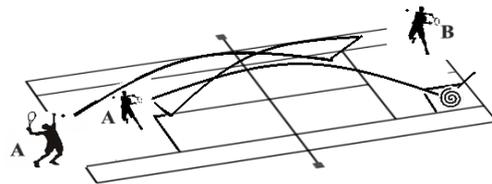


Fig. 3. *Description of Test 3, completion of the point with the right shot*

Test 4: completion of the point inside the field of play on the left side, player A serves in the left square, player B returns to the middle of the field, player A advances and executes a shot from the left side placed towards the area drawn on the field, a square with side of 2m. Player A has 15 attempts, counts the successful executions, player B is in a cooperative game relationship (Figure 4).

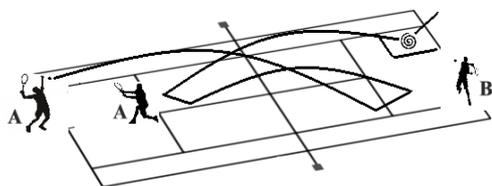


Fig. 4. Description of Test 4, completion of the point with the backhand smash

Following the data collection and analysis of the results obtained in the 4 tests, of the alternative game phase and the completion of the point, by the two groups of female athletes, the control group and the experimental group, we have the following information, which are found in the following tables:

Initial results of control and experimental groups

Table 1

Test/ Number	Test 1 (successfull shots)		Test 2 (successfull shots)		Test 3 (successfull shots)		Test 4 (successfull shots)	
	G.M.	G. E.	G.M.	G. E.	G.M.	G.E.	G.M.	G.E.
1.	8	8	8	8	9	9	9	10
2.	7	10	7	8	9	8	8	8
3.	8	8	9	8	10	10	9	9
4.	9	9	7	9	9	11	9	11
5.	7	9	7	6	8	8	8	9
6.	9	8	7	10	8	11	8	10
7.	7	9	8	7	8	9	9	9
8.	8	8	7	8	9	8	8	9
9.	9	10	8	7	8	9	8	10
10.	9	9	9	9	9	9	9	9

Final results of the control and experimental groups

Table 2

TEST/ NUMBER	Test 1 (successfull shots)		Test 2 (successfull shots)		Test 3 (successfull shots)		Test 4 (successfull shots)	
	G.M.	G.E.	G.M.	G.E.	G.M.	G.E.	G.M.	G.E.
1.	10	9	9	9	10	11	9	12
2.	8	11	9	10	9	10	9	10
3.	9	10	11	11	11	12	10	11
4.	9	10	8	12	9	13	10	13
5.	9	9	9	8	9	11	9	11
6.	10	10	8	11	8	13	9	11
7.	8	9	10	9	9	10	10	12
8.	10	10	8	10	10	12	10	13
9.	9	11	8	9	9	11	10	12
10.	9	10	9	11	9	11	9	11

Analysis of research results. Following the application of the mentioned samples

and the collection of data from the results obtained by the two samples of subjects,

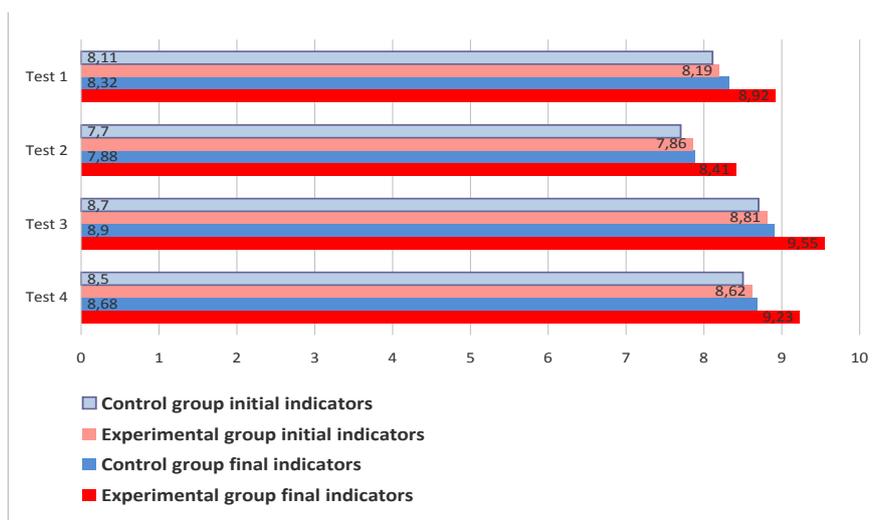
the control group and the experimental group, we present the following statistical analysis:

Table 3

Statistical analysis of the results of the tests of the alternative game phase and completion of the point of the sample of subjects included in the research (n = 10)

No.	Samples / tests	Groups and statistical	Initial indicators $\bar{X} \pm m$	Final indicators $\bar{X} \pm m$	t	P
		E	8,19±0,23	8,92±0,18	4,56	< 0,01
		T	0,25	2,14	—	—
		P	> 0,05	< 0,05	—	—
2.	Changing the direction of play in the game diagonally with the backhand smash	M	7,70±0,20	7,88±0,18	1,20	> 0,05
		E	7,86±0,21	8,41±0,16	3,67	< 0,01
		T	0,55	2,21	—	—
		P	> 0,05	< 0,05	—	—
3.	Winning right shot from inside the field	M	8,70±0,24	8,90±0,23	1,11	> 0,05
		E	8,81±0,24	9,55±0,20	4,35	< 0,01
		T	0,32	2,17	—	—
		P	> 0,05	< 0,05	—	—
4.	Winning backhand smash from inside the field	M	8,50±0,19	8,68±0,18	1,28	> 0,05
		E	8,62±0,20	9,23±0,16	4,36	< 0,01
		T	0,44	2,29	—	—
		P	> 0,05	< 0,05	—	—

Note: n=10 P - 0.05; 0.01; 0.001. r - 0.70; f - 9; t - 2,262 3,250 4,781; f - 18; t - 2,101 2,878 3,922



Graph no. 1. Graphic representation of the statistical analysis of the research

The four tests in the testing of the alternative phase of the game, the preparation of the attack and the completion of the point were chosen to observe and verify that the training model, chosen for the training of the female athletes is the optimal one.

The first test in this set of tests verifies the change of direction along the line, from the exchange of diagonal shots with the right shots shows an increase in the final indicators of the experimental group to a value of 8.92 ± 0.18 , compared to 8.19 ± 0.23 of the initial ones. These values lead to a difference of the average values of 0.73, compared to 0.21 as calculated for the control group. It recorded initial values of 8.11 ± 0.22 and final values of 8.32 ± 0.21 . For this sample $t = 4.56$, and $P < 0.01$, which shows a significant increase in the progress of the experimental group.

At the change of direction along the line, with the backhand smash, from the "rally" on the diagonal, the control group had an increase of the average values of only 0.18, in terms of the increase of the experimental group, it is 0.55. The indices recorded for the control group are: the initial ones, 7.70 ± 0.20 , the final ones 7.88 ± 0.18 . For the experimental group, the measured final values were 8.41 ± 0.16 , the final ones and 7.86 ± 0.21 the initial ones, with $t = 3.67$ and $P < 0.01$.

The winning right shot from inside the court, a very important execution for any tennis player, was tested in the next test and showed a significant improvement for the players in the experimental group. They registered an increase of the average values of 0.74, compared to those in the control group, of 0.20. For the experimental group, the initial values were 8.81 ± 0.24 , and the final ones $9.55 \pm$

0.20, for the control group, the initial records had the value of 8.70 ± 0.24 , and the final ones 8.90 ± 0.23 , with $t = 4.35$ and $P < 0.01$.

The last test of the experiment refers to the backhand smash, from inside the field, with which the players end the point. Here too, the results of the experimental group were very good, the increase observed from the difference of the initial indices 8.62 ± 0.20 and the final ones 9.23 ± 0.16 was 0.61, with $t = 4.36$ and $P < 0.01$. This improvement is clearly higher than that of the control group, where the difference is only 0.18, with initial values of 8.50 ± 0.19 and final values of 8.68 ± 18 .

These increased values of the experimental group, in all four tests above, encourage us to think that the training model presented in this work is good and can be successfully applied in the annual training plan.

3. Conclusions

The analysis of the theoretical and methodical positions of specialists in the field of tennis shows that the basic factors that determine the effectiveness of tactical activity of young tennis players of 14 years, may be the high level of technical training, psychological training - the basic element of which is training the athlete to achieve new and risky tactical actions (combinations) that appear during the game, as well as the presence of psychic qualities, which determine the effectiveness of the operative activity in the game; strength and functional training, theoretical training, based on the analysis of the world's top players, the athlete's self-analysis and the skills of building the game strategy.

The record data attest to the importance of the two technical-tactical game actions tested, the "change of direction" and the completion of the hit point inside the field, which allows us to mention a significant increase in the progress of the experimental group, compared to the control group with materiality level, $P < 0.01$.

Thus, in mesocycles, from the pre-competitive training period, exercises with a high degree of tactics should be introduced, with a higher weight during training, as this can lead to an increase in the rhythm of alternative strokes, to a better placement of the balls during trading shots, leading to earning points faster.

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