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METHOD OF MODELING IN PERFORMANCE TENNIS, THE MODERN SOURCE OF PERFECTING THE TRAINING CONCEPT

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Abstract

Performance tennis has made important progress in recent decade, both male and female, being illustrated by superior effort capabilities, dynamism in the technical-tactical actions of the game, power of concentration, quick recovery, adaptation to the diversified conditions of the game (time zone, weather conditions, opponents of different typologies).

The laborious work of the coaches and the athletes are highlighted by somatic and functional measurements, investigations and scientific decisions of the teams of specialists.

Sports performance in tennis knows in time a continuous process of modernization due to the valuable interventions of the related sciences, which leads to a permanent redefinition of the principle of modeling and remodeling, on all the components that contribute to raising the human limits.

The integrative (game and training) model includes the following components: the player's model or typology, the game parameters, the basic component model of the game.

Modeling involves the reactivation of the specialized knowledge regarding the elaboration of valuable and performing training programs with maximum efficiency, without forcing the sportsman's body, modeling that must take into account the type of player (offensive, defensive, combinative) and a certain one technical, tactical and psychomotor strategy.

Also, the modeling implies a good hierarchy of the criteria for evaluating the progress in preparation and in the game, conditioning and harmonization between the components of the training and the elements of effort and recovery, hygiene and nutrition, adaptation and medication, motivation.

We can state that once the game and training model is fixed, this activity can only be a stage, after which it will have to be improved by adding new modeling elements or by eliminating some that no longer correspond to the biological stages of the tennis players or require a series of adjustments that accelerate the improvement, according to the major requirements of higher level.

Keywords: *modern tennis, methodology, technology, concept, model and modeling*.

Introduction

As is well known, performance tennis has made significant progress in both men's and women's training in terms of training methodology, content and competitive game skills.

The number of tournaments has increased, to 60 annually, the density and value of each tournament being very high.

The official tournaments and games take place in various conditions of adversity, the playing surfaces are faster and harder, time zone differences, weather conditions, more and more vocal types of spectators, the increased stake of the games, all these require tennis players to effort considerable, both physically and mentally.

All these features of the current game of tennis ensure a show of vigor, but also requires a high level of physical, mental and scientific training in all parameters of sports training.

The whole set of specific conditions of the current game of tennis firmly demonstrates the quantity and quality of work shared by tennis players - coaches and teams of specialists (psychologist, nutritionist, physical training, masseur, etc.) to achieve the level of performance required of a champion.

Sports performance in tennis, over time has continuous progress, modernization and improvement, due on the one hand to the contribution of related sciences that constantly contribute to the consecration of the principle (method) of modeling on all components of training, to increase sports performance at human limits.

The topicality of this issue is clearly detached from the very knowingly specifying the major objectives of sports training in tennis, aiming at the method of modeling in order to organize, conduct and methodical decisions on the quantity and quality of effort made by the tennis player.

Modeling in performance tennis

Game modeling and training in performance tennis, is in our opinion a notion of great complexity, with a vast and dynamic content.

A possible definition of the concept of modeling in performance tennis, means the sum of knowledge, and skills and their scientific interpretation, respectively the technical-tactical, physical and mental component in order to increase the competitive efficiency.

Modeling in the official training and game procedure is influenced by the means and methods selected and applied.

Tennis modeling can include:

a) offensive approach to the game technique and tactics;

b) the components of the game have a constant dynamics and precision throughout the game;

c) speed and force of hitting the ball to exceed the limits of adversity;

d) ball-free play, an adjunct to increase the efficiency of tactical game actions;

e) superior techniques of confusion, imbalance and change of game rhythm;

f) increasing the percentage of efficiency of the actions in the fixed game phase (service and return to work);

g) mentality, increased attention and rapid recovery during the game;

h) separate and correlated approach to the parameters of physical and mental effort in the dynamics of the game;

i) decided decisions of the game to the detriment of pointless (unnecessary) risk-taking errors.

The elaboration of the game and training model also presupposes a real solution of the methods and means of specialized training, adapted to the biological, motor and technical-tactical characteristics of the athletes.

The increasing penetration of science in the methodology of performance tennis has contributed and continues to contribute to the removal of "limit" factors, which are gradually being replaced by the multitude of progress factors. High-performance sport, in our opinion, has a maxim: "limit without limit", an aspect that must be taken into account in human performance.

Performance sport, by its definition, is a specific activity limiting the physical and mental possibilities of the individual, M. Epuran (1990).

As stated in the literature, maximizing sports performance in tennis cannot be achieved without maximizing all the factors that determine sports performance (physical, technical-tactical, mental), to which are added the capabilities of effort, regulation, adaptation, recovery, nutrition, management, and, of course, the professionalism of specialists and athletes.

When we aim to address such an important issue for the development of game and training models, such as the game model for performance, which we cannot overlook, because, in addition to the volume of scientific and methodological information that specialists he discovers them constantly, in this context being permanently driven by the natural desire for perfection in the field.

Regarding the approach of the game model, it will be for us, the objective of great importance for a series of scientific, theoretical and practical clarifications. We aim to bring theoretical data to practical efficiency, and based on complex studies of the game of tennis at the higher level, to which is added our experience in the field, to be able to concretize the elements of objectification regarding the content, essence, purpose and efficiency, the model of play and physical and technical-tactical training in tennis.

In defining the game and training model in tennis, we started from the evaluation of a series of objective benchmarks, which through the essentiality and frequency of their presence in the game, can create the formal and content framework of the entire training and official game.

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Also, they can offer us a series of components from which we can start in order to achieve a modern methodological thinking, regarding the increase of the efficiency in competition. A first example can be the one regarding the definition and content of the player typology.

The methodology of elaboration of the game and training model is based on a series of data retained from the official top games as well as from trainings, which were constituted in dynamic components of the modern tennis game, such as:

- In the whole process of preparation and play, the physical component has a determining role, with the basic structural side - explosive force in resistance regime;
- The preparation technique for hitting the ball (positions, racket grip, forms of movement on the field, placement of the ball and repositioning on the field), are essential conditions for superior physical and technical training, for the efficiency of tactical game actions;
- Increasing the dominant role of the dynamics of blows from the side and from above, with emphasis on the finishing side of the point;
- Accentuating the acceleration speed of the tennis racket on the final route of hitting the ball, in order to catch the opponent and open wide angles of attack and their efficient use;
- Defining the frequency and content of efficiency factors when hitting the ball (direction, length, speed, trajectory and effect printed on the ball) in order to trigger, maintain, change and combine the mentioned factors, to gain the game point in the four tactical phases;
- The content and scattering area of the ball in the geometric space of the playing field, as well as the game actions specific to the player typology - offensive, defensive and combinatorial - within the forms of adversity with similar or different player typologies, to which is added the actual play and total play;
- Correct ratio between training and competition, by performance stages: children = 25% -75%, juniors = 40% -60%, seniors = 75% -25% (competition-training);
- The correct assembly and development of the training factors according to the purpose and content of the four training micro cycles (basic, with and without competition and compensation);
- The parameters of the official game and their importance for designing the content and conducting the training lesson;
- The content and use of modern methods of physical and technical-tactical training, as well as the use of a specialized fund of means for the purpose pursued;
- Correct and efficient correlation of the effort-recovery ratio in and after the training lesson and on the training macrocycles, with dynamic elements to increase the competitive performance;
- Consideration and application in practice of the trends and evolution of the game at the level of high performance, as a necessity of stimulating and capitalizing on the bio-psycho-motor potential of the tennis player;
- Resistance to stress, increased game capacity, risk taking in the fundamental moments of the game and increasing the percentage of successful actions;
- Development of automatisms regarding the technical-tactical actions of the game, built on an exceptional physical and mental foundation, which would allow the player a smooth and efficient development of the body forces and the dynamics of the game phases, so that the player does not resort to compensatory movements. and erroneous decisions.

All these fundamental components of the preparation process and of a modern game that takes place at the level of performance have been objectified with the help of data collections from the official games of the ATP Tour, Grand Slam, Davis Cup, Tournament of Champions and Open Romania.

The data obtained from the official games and trainings at different stages of preparation, as well as their processing, gave us a complete and complex palette of the official game, which helped us to formulate the model of play and training on all stages of performance.

Based on what we found regarding the recordings and observations made, we can say that the game model in performance tennis also consists of a set of indicators differentiated on somato-functional and

psychomotor profiles, which combined with technical-tactical indicators, essentialize the structure and the content of the game model.

The performance forecast can also be another basic indicator of the game model, because it has in front the dynamics of the competition as well as the training requirements imposed by the training factors, being the value measure of the quality of the training process.

The need to develop the game and training model is given primarily by the fact that it highlights the confirmation or refutation of the athlete's training process, and on the other hand, becomes a concrete object of study and performance measurement using data on the report between efficiency and game or training error.

The evolution of the game point and first of all of the game model, in order to achieve victory in an official competition, can be influenced, among others, by the following factors:

- the quality of the playing surface;
- the value of the opponent;
- sports form;
- the ability to overcome in difficult tactical and psychomotor plan the difficult moments of the game;
- the stakes and the ambiance of the game;
- the quality of the application in the game of the technical-tactical knowledge, respectively of the game model;
- gaming experience;
- environment conditions;
- evolution and efficiency in the game, depending on the type of player and that of the opponent.

In order to better understand the game and training model, we will try to define it as follows: "the game and training model, according to our wording, represents the whole set of scientific-methodical and practical concerns, aiming at the concept of assembly and to diversify the components of the game in the conditions of a permanently offensive adversity and to adapt to the individual particularities and the capacities of the player to carry out the official game at a higher level".

The development of the game and training model offers access to information, to a professional thinking and mentality. It also contributes to the cohesion of a modern conception of the game, as well as a spiritual comfort for the player.

The game and training model in performance tennis, highlights the profile and typology of the player and represents the fundamental condition for capitalizing on the coach's specialized ability as well as the quality of the athlete's training, in relation to the major requirements of current sports performance.

In our opinion, the elaboration of the game and training model also implies systematization in theoretical and practical-methodical plan of some basic principles, rules and requirements regarding the content of the current game, the way of approaching the technical-tactical and physical components, in relation to the evolution of adversity in competition. The game model conceived and applied in the official competitions, automatically leads to the setting of the maximum training parameters, as well as to the efficiency obtained by the player in the official competition.

Once the game and training model is developed, for the coach appears first of all the definition of the criteria and the need to prioritize the basic components of the game, which must be improved with specialized means and methods and adapted to the individual characteristics of the athlete. The game model is subject to the permanent examination of the evolution of the player's training, in terms of performance in training and play, as well as highlighting the champion mentality.

In addition to a number of performance advantages, the model creates premises for increasing the requirements in training and play, regarding the benchmarks for marking specific progress.

The game and training model, once fixed, creates for the coach-sports couple, but also for the team of specialists, the measure of their capacity to increase in performance objectively, so, in this way, the game and training model is an indisputable reality which becomes trainable and measurable.

By designing the game model, variants and stages of their realization can be established, so it can be confirmed that the game model places the training and game strategy on objective bases, from which tactics

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specific to the diversity of situations that are present can be adopted. in performance tennis and which must be known and countered accordingly.

Fixing the game model helps us to formulate more precisely the content of the training on lessons and micro cycles, also it is possible to better manage the preparation time, in the sense of approaching the training factors and the concordance with the training and performance objectives.

Increases the player's personality, when these well-defined game and training regimes are clear and content, and the tennis player can become a creator of tactical variants of the game.

The effective application of the game model in official competitions involves, among others:

- Prove the size and value of the game tactics;
- The physical and tactical mechanisms of the game become effective means;
- Basic regimes in the application of the game technique and tactics;
- Dimensions of motor qualities to support physical effort;
- Self-overcoming capacity;
- An increased ability to concentrate in the active phases of the game and a permanent offensive and efficiency in ball actions;
- Changing the rhythm of the game by knowingly alternating, the hitting force of the ball, the lift effect with the cut one, the length, direction and trajectory of the ball, etc.;
- Triggering and maintaining the direction of the ball along the line or diagonally, until the opportunity is created to complete the action, with large openings of angles of attack and increase the speed and force of hitting the ball, from one action to another;
- Attracting the opponent towards the net and meeting his movement by directing the ball at the level of the legs (ball with low trajectory), or passing;
- The total offensive to the balls that fall near the line of the service space (5-6 m of net) with directions that favor very wide openings of angles of attack, and their efficient fructification;
- Practical knowledge and skills of the game, against right-handed, left-handed opponents or similar or different types of players;
- Equal play in terms of efficiency on both sides of the playing field (longitudinal);
- Dynamic and balanced game with a high percentage of efficiency in conditions of changing the playing surface, weather conditions (sun, wind), spectators, increased physical and mental endurance throughout the game;
- Higher percentage than the opponent, both at the base shots and those with top shots compared to those on the side and vice versa.

Among the factors that contribute to the success of the game and training model, we can also list:

- High speed of analysis of the information from the development of the game and of the efficient reaction (correct and fast decisions of the game), in response to the offensive of the opposing player;
- Depth view of the game object (ball) and of the maneuvers performed by the opponent;
- Focus on triggering the game phases and efficient completion;
- Exceptional volitional qualities in the usual situations and those of high tension of the opponent;
- The level of self-exigency;
- The kinesthetic and spatial-temporal sense;
- The ability to recover in the regular moments of the game and to resume the following phases with maximum force.

At this stage it is considered that the player has reached a high level of training, so that the technical mastery no longer poses problems if it is supported by an exceptional athletic and mental training. Although this is the case, the diversity of the forms of bilateral offensive game requires players to maintain a high level of technical and tactical skills to apply in the game in extremely diverse variants and nuances, which are expressed in particularly refined executions, almost imperceptible at first sight.

The preparation procedures for hitting the ball have a primary role in supporting the technique and tactics of the game. The firmness of the position on the field, always adapted to the areas where the ball falls on the ground, make this process a trigger for actions of great performance and efficiency.

The diversity of the forms of movement in the field, which are the object of sustained trainings, are based on and highlight the motor qualities of force-speed in endurance regime necessary at this level.

The placement of the ball is obvious when the player performs the relocation in the two strategic areas 1 and 2 of the field, respectively the area of the line behind the field and the central area of the intersection of the lines from the service spaces with the center line of the field of play.

The short distances, preceded or succeeded by sudden starts and with firm stops, continued with other actions during the game phases, masterfully outline the physical but also the mental effort to perform some very effective ball actions.

The side and top shots (the 8 technical procedures) ensure the content of the game on the entire surface of the field, formulating for the specific tactics, variants and effective nuances on each phase of the game.

The technical-tactical performance in the game is given by the player's ability to economically but efficiently use each action on the ball, as well as how to force the opponent to make mistakes.

At the junior level, the official game and the training program on the training factors are in a ratio of 65% competition and 35% training, so the competition has a dominant character.

The value of competitions at this level has increased greatly in the last decade, both by the offensive nature of each phase of the game and by the athletic and technical-tactical value of tennis players.

All technical procedures, without exception, have as basic support psychomotor skills and a permanent tactical content, made at the risk area, but also of great virtuosity.

The technical procedures cover the individual characteristics of the players (somatic, psychomotor and even of the player typology), and the efficiency factors with priority those of the direction and speed of hitting the ball, complete the technical arsenal of the game.

The speed of the ball at the sidekicks (right and left), can exceed 80-120 km / h, and at the top kicks are known high speeds that reach values over 200 km / h.

The characteristics of this high level of sportsmanship are practical ways of triggering, changing, maintaining or combining efficiency factors, in conditions of maximum adversity (playing surface, type of opposing players, evolution of the score).

The tactical use of all technical procedures favors the opening of large angles of attack, causing the opponent to cover long distances to cover the playing field and little time for action on the ball, which confirms the meaning and current content of the modern game of tennis.

Conclusions

Official game modeling and training is a very complex notion, with a wide dynamic content and multiple stages of improvement.

The use of modeling in tennis training requires the selection and use of methods and means that in turn can be evaluated and adapted to the stages of evolution of the competitive game.

Modeling is essentially an attribute of superior performance, due to the fact that it is based on the concept of their development by the coach that targets the technical-tactical components of the game, with strategy and game tactics, incorporates the correlated approach to physical and mental effort, mentality and random factors, in a word formulate the model of the game and the player.

Modeling the training and the competitive game of tennis proves the professionalism of the coach and the ability of the tennis player to get fully involved and to become a role model.

From a structural and functional point of view, the method can be considered as a model, an organized set with programs and methodical rules to achieve, respectively with steps of unity between knowledge and action, between theory and practice, which it models, orders and processes according to the final objectives.

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