

SELECTIVE CRITERIA FOR THE DEFINITION AND PRACTICAL USE OF THE SPECIALIZED COMPOUND OF METHODS FOR IMPROVING PERFORMANCE IN TENNIS

Criterii selective pentru definirea și utilizarea practică a complexului de mijloace specializate pentru creșterea performanțelor în tenis

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Abstract

The individualization of tennis coaching is based on the process of getting to know each player's individuality and, based on this line of reasoning, the most appropriate methods and means of preparation will be chosen and applied to achieve the expected objectives.

Researching all the individual characteristics will help to know and understand the needed elements (attributes or shortcomings) that underlie an athlete's success. The more complex, the more solid and useful our knowledge will be, based on modern research methods pertaining to the performance-specific requirements of the tennis game.

Keywords: specialized methods, game objectification, official match, physical demand, mental stress, definite game, total game, break, period.

Introduction

The present, the catalyst. Rocketing tennis competitions as well as the outstanding growing number of players' remarkable performances are largely due to improvements in all areas of methodology and advanced technologies for training athletes.

The present research topic shall have a great relevance to the field of performance tennis without being limited to just that, provided that it hasn't been given the opportunity to create an over-particular and applicative filter for the decisive importance possessed by the tennis game content know-how (technical and strategic game paths and players' physical effort) which is a modern source of functional structures and specialized means for coaching the player.

Over the past few years we have witnessed great tennis matches worldwide – The Grand Slam – Australia, France, UK and USA, as well as over 60 big ATP tournaments (more than one tournament weekly).

The great tours number to which we shall add also the grand players' most valuable performing will prove that the tennis game has reached its unabridged peak on its superior strategic part over performance on both its technical and strategic refined planning as well as its players' high athletic exercise.

In this paper it was left a valuable methodological principle, modern and necessary for the design and use of the practice structures system (**means**) that should stress the learning, enhancing and improving the full court game components.

This precept can be interpreted as follows: "In the coaching methodology it is important to start from the game to the training and then go back to the game", an idea that represents a plausible modern method in our opinion.

In this context, the hypothesis of this paper will express indeed the dynamics of progress in tennis performance as a result of contributions to the modernization of tennis technicians and specialists, as well as of the related sciences: biomechanics, biology, biochemistry, psychology, nutrition, apprenticeship, which will measure the scientific experiment, followed by effective decisions and evaluations for training.

This paper is based on a series of records, observations and discussions with national and foreign specialists, held during 2017-2018 at the Grand Slam competitions and the ATP tournaments from Doha and Dubai.

We should mention that the 4 Grand Slams chosen are held in the 3 out of 5 winning sets system whilst the ATP tournaments have a system of 2 winning sets out of 3.

The records focused on the number of technical processes made by the players from one side of the court. There were taken into account also the following: the game actions efficiency, the direction of the return serve and the distances run by the players.

Table no.1. *The data obtained were gathered and presented in the below table.
This table features the average shares for a single match.*

Official matches	No. game plays	Set no.	Serve no.	Forehand no.	Backhand no.	Volley shots no.	Demi volley shots no.	Lob no.	Stops no.	Court run
Grand Slam	8	32	170	850	770	70	40	15	52	7500
Tournaments (Doha, Dubai)	8	19	102	600	510	39	27	7	21	4000

After analyzing the data gathered via the TV channels stream, a series of game components have been retained for projecting the main training means poles:

- Players' strategy (offense, defense, combination)
- Game actions efficiency level
- Game play launch and end
- The game play angle opening area
- Court distances run throughout the actual match
- The most exploited court areas
- Serve and return strategy

Training for tennis turns rational and efficient when, along with several controls, there will be used optimal ratios of selected means for usability criteria and will demand proper efforts from a player, close to the match requirements. The methods used and the whole player's training need to maximize the player's technical and tactical gears and to advantageously develop general and specific driving qualities, contributing to the continuous improvement of the ability to adapt the sporting body to increasing efforts.

In order to select, adapt and develop the most effective means of training the tennis player, it is necessary for the technicians to find the best methods of objectifying the competitive game play, from which to retain the structure, the functionality, the frequency and the level of effort required by the athlete to grasp the technical mechanisms and the complexity of tactical game phases.

As it's well known, the tennis modern game has a varied content due, on one hand, to the peculiarities of age, sex, training background, competitive experience, playing area, to which can be added constant aspects of stakes, meteorological or mental state factors etc.

Taking into account the above forethoughts, we believe that specialists and field technicians should make increased efforts to detect those quantitative and qualitative evolution parameters of the current game play at the level of a great performance and then, by appropriate interpretation, to be able to retain objective-able elements of the competitive game, in order to adopt the most suitable means of training.

Out of the data we gathered from several records of the official game plays, we could observe the main technical and strategic parameters of the match as follows:

- the total number of serving actions consumption to achieve a point, a set or a full match;
- player's efforts content per time units (3 ", 5", 8 ", 12", 15 "... 30" - 40 "etc.);
- the distances run and their purpose (in active moments of play);
- the dynamic of organizing and finalizing the point (on the 4 tactical phases of a simple game and its components);
- the spread of ball line from the opponent and return (the court areas most exploited);
- methods to win the point and their frequency of use;

- means to achieve, change, combine and maintain the serve impact efficiency (direction, length, trajectory, effect and speed);
- the segments, joints, ligaments and muscles degree of being required to support the main serve bending movements (directions, amplitude, frequency);
- the duration of the actual playing time and the duration of the total game;
- the functional parameters variety of the sporting body (circulatory, respiratory, digestive etc.);
- player's personality and creativity during the match;
- difficult situations during the game play and the ways to overcome them;
- technical and strategic risk actions and their influence on sport performance;
- the actions content and their effectiveness on various playing surfaces;
- the game play content on different player types (offensive, defensive or merger), as well as on the official encounters between the different or similar typologies;
- the mental effort and the player's ability to restore himself between the points and the regular breaks in the game play's evolution.

Taking into account these parameters of the competitive game to which others can be added as well, along with real game play data, there can be gathered clarifications and inexhaustible sources of ideas for developing the most effective tennis training means.

It is possible that less experienced coaches, not taking into account the above might be thinking that imagining an exercise is an easy task for every one. We do not share this view, because often fantasy and superficiality in the making and use of an exercise automatically lead to technical, strategic, physical and psychological errors, as well as affecting the most serious of the body's functions in terms of quality and amount of athlete's effort required during a match. In deed, the performance sport, through its peculiarities, is a "testing ground" for novelty and human creativity. Hence the need to seriously treat the form, content and the use of means to help drive the game and increase efficiency with minimal efforts on an athlete's part.

Of course, in order to build and retain the most effective means of training, as a result of the data gathered from the official matches, the coach will have the duty to carry out with great care their structure and functionality, as they will subsequently undergo technical, tactical, dynamic, physiological, biomechanical tests) in order to locate the effect sourced by these means on an official game play requirements level.

Often, if these means yield the expected return, they will also be used as control samples, which can measure up of the efficiency of the training. Any means of training selected and used must also have a degree of appeal to the body of the athlete, which will provide expected and always appropriate responses to those in the competition (Alexe, N., 1993).

Basically, as the specialized thesis works are showing, confirmed also by our concerns in the field, it is noted that not only the number of both technical and strategic means used in the training of the performance tennis player has diminished, but also the physical training, yet we have to keep in mind that those remaining in the training fund, specialized and structured in the competitive game, reached a higher level of adaptability for the athlete.

Of course, the element that amplifies the value of the elaborated means is given all above by the methodology of using and directing the physical and mental efforts that the athlete must submit when practicing.

Removing the ballast of inefficient means that still exist in the practice of tennis will, in our opinion, contribute to a substantial leap in the methodology of training the performance tennis players.

On multiple occasions, some of the younger coaches use quite the same amount of ineffective means of "classic tennis" for all stages of training. These means, apart from not having the desired effect, often contribute to the athletes' boredom and indifference.

The means retained in the training economy are still to be verified in practice, and the biological cost whilst the corresponding effects on the technical-tactical, physical and psychological plan are assessed on a permanent basis. Certainly, testing these means must be done by some known rules that set the repeat mode, the tempo, the pacing, duration, number of sets and the duration of breaks.

The tennis training tools, in our opinion, can be divided into six basic groups:

- A - the general physical training means group;
- B - the specific physical training means group;
- C –the technical and strategic training means groups;
- D - the group of complementary sports means;
- E – the psychological training means group;
- F – the special methods group.

A. THE GENERAL PSYCHICAL TRAINING MEANS GROUP

- base means and acrobatic gymnastics (individual and pairs - with and without devices);
- means of athletics (running, jumping, throwing);
- natural means (sand, water, snow, versatile terrain etc.);
- stacks and dynamic games;
- complementary sports - sports games (basketball, handball, football and winter sports - skiing, skating).

B. THE SPECIFIC PSYCHICAL TRAINING MEANS GROUP

- means for analytical and global motricity (technique imitation);
- means for developing specific motor skills: speed, strength, resilience, mobility and flexibility - at the level of the top tennis game segments;
- means for strengthening joints, ligaments and muscles with interest in providing specific movements;
- means for the development of combined motor qualities (explosive force, resistance to explosive force in the upper and lower line);
- the means of learning the technique and tactics of play (the dynamic regime).

C. THE TECHNICAL AND STRATEGIC TRAINING MEANS GROUP

- means for learning, strengthening and refining technical preparation techniques (rocket socket, position, landing, ball placement and repositioning in strategic areas of the field);
- the means for learning, strengthening and refining the technical mechanisms for serving procedures from the sides;
- the means to learn, enhance and refine the tactical content of side-strike techniques (efficiency factors);
- the means to learn, strengthen and refine the technical mechanisms and procedures for smashes;
- means for learning, strengthening and refining the tactical content of smashes (efficiency factors);
- means for learning, strengthening and improving the technical mechanism of return serve procedures;
- means for learning, strengthening and refining the tactical content of return serve procedures (efficiency factors);
- the means to learn, strengthen and refine the tactical moments of game play phases during a single match:
- the fixed play phase and its component moments;
- the alternate game phase and its component moments;
- the decisive game phase and its component moments;
- the pass game phase and its component moments;
- means of anticipation development;
- attention stability under fatigue;
- means for increasing physical and nervous system self-regulation;
- means for special strategic situations (adversity cases, playing surfaces, score evolution etc.);
- learning and testing game plays;
- the means to learn, strengthen and refine the double game tactics (male double, female double and double mixed).

D. THE COMPLEMENTARY SPORTS MEANS GROUP

- practicing winter sports (Alpine skiing, hockey, ice skating).

E. THE PSYCHOLOGICAL TRAINING MEANS GROUP

F. THE SPECIAL METHODS GROUP

- video and audio equipment;
- physiological investigations equipment;
- instruction equipment (balls throwing machine);
- electronic equipment (to simulate adversity for the bilateral game and to record the content of the official game play as well as the training).

It is worth mentioning that once setting up the structure and methodology for using the gathered methods, validated on levels such as biomechanical, technical, strategic and physical, along with the exact knowledge of direct or indirect, approximate or certain relationships with the game's specific performance, the operation standardization will be initiated.

As stated by Alexe, N., (1993), this suite of actions - the objectification, the inventory of means, their complex and diversified analysis, their selection, standardization and transformation into control samples can contribute to simplification, ordering and, at the same time, leading the coaching to the requirements of a match.

As a result of the performed operations, it is possible to proceed automatically to rationalization which aims to learn the values invested in the training.

Thus, such a suite of operations (objectifying the game, creating means, choosing them, determining and then justifying them) shows that the training process can and must be conceived in its entirety, and the parts that make it up are correlated and determined.

For the efficiency of the coach's work and the increase in sports performance, we consider that coaches need to be careful to develop batteries for training (physical for all motor skills as well as technical and strategic training), to codify them, describe them and to be accompanied by an appropriate graphical representation, dosing alternatives on each exercise, to which they can resort to the design and realization of the methods for training lessons.

Conclusions

The tennis game at the level of great performance encountered at this stage a special evolution on all levels of sports training and competitive game, which justifies us to affirm that the basis of these spectacular performances are the principles of selection and use of specific and modern means, as well as an effective methodology for training and practicing tennis.

The analogy and integration of the specialized training means at a higher level leads to the formation of automatisms and game mechanisms of high mastery and efficiency in the official competitions.

The technical, strategic and psychological training we have presented have a strong impact on the resistance of the tennis player to the complex of physical and mental efforts submitted during the official matches.

The elements that prove and highlight the quality of the means used to prepare the tennis player have two coordinates:

- 1) superior results gathered whilst training (practice sessions) as well as at the official matches;
- 2) a number of training tools can be used as control samples, laboratory/ field tests or investigations, followed by effective methodological decisions.

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