

PHD THESIS SYNTHESIS
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THESIS TITLE:

“CONTRIBUTIONS TO THE DEVELOPMENT of the TRAINING AND PLAY MODEL FOR THE JUNIOR TENNIS PLAYER, TOP 10 ITF”

KEYWORDS: tennis player, physical training, technical training, tactical training, preparation, competition, contest, generation, top player, training, preparation, game, junior, junior model, top.

The thesis is structured into three parts, containing 13 chapters and one volume of annexes, a bibliography containing a total of 183 works by Romanian and foreign authors.

INTRODUCTION

Sports, like other branches of competition, registered an impressive development in the last half of century. Spreading and the relative levelling of their practice in the world are the effect of globalization and media coverage of competitive life, global and continental. The sporting event has exceeded the political and fashion event. Sport has created an industry, an economy, has boosted the history, philosophy and social meanings. The phenomenon has known a ‘spiral’ of evolution on a conceptual level. From a "game" a specific competition for human nature, has gradually become more and more an activity structured by rules, by rituals, being more deeply analysed in its substance.

This research undertakes to analyse the lines of game development in recent decades, from the characteristics mentioned in a study about sports woman Buzărnescu Mihaela and female players of her generation, which we called "Generation 2000". Under these information collected over a decade and a half regarding those athletes and confrontation thereof with results in national and international competitions, these athletes are constantly compared with the values of the top ranking athletes, we can establish what the development lines were and how they evolved over time for women's tennis, national and global.

PART I:
**“INFORMATION ABOUT CURRENT PERFORMANCE IN
TENNIS”**

Over the doctoral school, research started with a presentation and critical processing of documentation, within which we have focused our attention on determining the status of knowledge and level thereof over previous approach of the theme. In this section, which may be called the "current state of knowledge", we gathered all the information known in the national and international literature on the subject of the thesis addressed.

The study of literature resulted in consulting internal and external publications, published in the last decades by experts in the field, local and foreign authors who have addressed through interdisciplinary visions, aspects tennis practices at a high level in the XX and early XXI century.

"Tennis is part of the large family of sports", is being an individual and team sport (in the doubles). Between coaching on one hand and competition on the other hand, there is a very strong overlap. Practically, they are a continuum: training cannot be conceived without competition and vice versa, competition and performance without an adequate preparation. In the first part of the thesis, we conducted a detailed presentation of the most important concepts, starting with the explanation of the keywords and then that of the content namely the title of each part and the four chapters thereof.

To realise the training, all its factors - technical training, tactical, physical, and theoretical and, more recently, the mental one, must be performed at the highest parameters in order to achieve the desired sports excellence.

In the game of tennis, training and contest / competition modelling is done through the work of the couple coach-athlete, to which a team of specialists is added, that conceive and apply in the preparation process ideas and scientific programs of great interest and efficiency.

Training and competition are closely intertwined. Practical, they are a continuum, meaning that training is inconceivable without competition and vice versa, competition and performance without adequate preparation.

The main type of activity, for seniors, is the competition, being known that they prepare "through competition for competition."

PART II:
**«THE MANAGEMENT OF PRELIMINARY RESEARCH
REQUIRED FOR MODELLING TRAINING AND GAME IN TENNIS»**

Preliminary research has facilitated the structure of an overall picture regarding the relation towards the elaboration of the training and game model for the junior tennis player playing in our country, in line with the model of the junior and senior international players.

The technology applied for the preliminary research was implemented within the National Tennis Centre, within sports clubs where athletes are registered and within the competitions attended and where the author was present, during the years 2003-2010. The preliminary research represents an important part of the doctoral thesis, by providing the possibility to verify the working techniques and record the responses to the questionnaires used.

Premises:

- initiation, which occurs during childhood years (4-5 years);
- enrolment in the first competitions (with some regularity annual);
- continuous participation in official competitions dedicated to junior ages (which varies between 14 and 18 years);
- establishment in national and international competitive life at senior ages.

Purpose:

The purpose of this paper to objectify, appropriate with means and methods corresponding to the stage of preparation and participation in national and international official competitions for experimental group components, but also to make an inventory of all conceptual and practical aspects on the development of training programs and models, as well as increasing efficiency in competitions.

Objectives:

- record the thematic content of the training lessons for these players to learn their technical initiation, physical and tactical, the amount of repetition, sequencing of these factors in the economy of preparation, duration, composition of daily, weekly, monthly and yearly cycle of training;
- establish their debut in contests, level, frequency and frequency of their monthly and annual calendar;

- synthetic composition models of competition and training.

Preliminary Assumptions:

- the path of knowing the defining values of the contest may be a proposal for developing the model followed for junior age, followed and applied to the senior;
- junior may constitute an intermediary target or a sole one, a goal in itself;
- competitive factors that dominate the junior female players leading them to address preparation (training) more seriously, to obtain better results in their senior career;
- competitive situation may be the end result of the large number of hours of training and verification of how it has been worked;
- awareness for junior players in training, followed by evaluation in competition, represents resources likely to create a model of training and playing in tennis.

Tasks:

- exploring specific tennis information sources;
- profound reflection on ideas and information about the chosen topic;
- limiting or extending the theme;
- development of specific research questions;
- setting the objectives;
- setting and grouping the main ideas;
- establish preliminary research sample;
- sociological approach, using two questionnaires developed;
- evaluating the results of the preliminary research.

Conducting Research

Research Methods:

- bibliographical documentation method
- observation method
- conversation method
- investigation method
- protocols method
- registration method

- pilot experiment method
- mathematical-statistical method
- graphic method.

Preliminary organization research

Place

Preliminary research was conducted at NTC Bucharest, at clubs where female players are registered and competitions in which they participated.

Subjects

They are represented by our junior players "Generation 2000" (table no. 18, Appendix 5), as the author called it, generation that includes the following 13 players: Irina Begu, Elena Bogdan, Buzărnescu Mihaela Alexandra Cadanțu, Sorana Cirstea, Dabija Elora, Alexandra Dulgheru, Gallovits Edina, Gojnea Madalina, Simona Halep, Monica Niculescu, Raluca Olaru and Liana Ungur, and in the top 20 international players, according to WTA rankings of January 3, 2011 (table no. 19th, Annex 5).

The age of the tennis player "Generation 2000" is given in Annex 18, where are mentioned the years that the tennis players have completed their junior years, in tennis, established at 18 years old.

Period:

The research was conducted over a period of 8 years, between the years 2003 and 2010. Throughout the experiment, we worked with junior female players, their coaches, parents, physical assistants and referees from the national team, analysing their progress for the duration of the training and participation in competitions.

7.1.4 Logistics used

Knowing the subjects with which I have worked with is a wide activity, complex, which was often sprinkled with renewals of approach, exchange of conflicting opinions and even confusion. This activity is specific to a tennis coach, but also to a researcher and included the following actions: observing subjects and organizing the basic moments of the research, administration of tests, samples and control rules, studying the behaviour, but in the activity, most important, has been

studying the effectiveness of physical and technical - tactical training, based on data recorded in official competitions.

LESSONS LEARNED FROM PILOT RESEARCH

Preparation of juniors national and international players must meet fundamental training requirements for the training system (with all its forms: physical, technical, tactical, theoretical, psychological), through which is acted in order to enhance and improve all processes:

1. The development of the contest pattern for tennis players in our country has been made under the objectification of their games, being performed over the years 2003-2010, recorded at the tournaments of one of our subjects (M. Buzărnescu) and gathered from the fellow coaches of her colleagues from the same generation or recorded at their games, where the author was present.

2. The duration was also a source of knowledge, especially about the game features of the top 50 WTA ranking positions, over the same period included in the survey.

3. Recent international bibliography as well as the national one (after 1990), did not address the topic of contest model, those of the champion and tennis training, nor from other disciplines, braches or sporting events, or even those included in the Romanian Olympic Games. Romanian performances in sports obtained in the respective decade of the last century are an indisputable proof of the effectiveness of thinking and practice within the Romanian sport.

4. In the past 20 years, the original achievements were ignored, forgotten or have disappeared from the practice of our sport, which records a descending chart.

5. A decrease in the level of performance tennis (WTA and ATP rankings positions) prompted us to address and update such a theory and practice in tennis, in which I was involved because I initiated, trained and supported (by management) on one of the subjects of the research, tennis player M. Buzărnescu.

6. To increase the source of the information required to develop the selection, training and competition model in tennis, we have included within the observation and follow-up athletes representative of Romanian tennis, as well as her colleagues, that make up the "Generation 2000".

PART III:
**"PERSONAL RESEARCH REGARDING THE DEVELOPMENT
AND APPLICATION OF THE TRAINING AND GAME MODEL FOR THE
TENNIS PLAYER - JUNIOR, TOP 10 ITF»**

General overview of experimental research methodology.

Concrete experimental research began since the early study years of doctoral school and in October 2008, with scientific documentation, the study of specific literature references, and psychological, social and teaching sciences, both nationally and internationally.

The first two parts of the thesis, through the chapters they include, concluded the presentation of main theoretical and methodological issues reflected in the specific literature, as well as the identification of technical and tactical procedures, means and methods specific for the tennis game that can be used to achieve the goal.

In Part III of the thesis, we present an experimental exploratory research that has personal contributions oriented to the main results of the experiment and conclusions of the paper, which will lead to the progress of women's tennis in our country and not only that.

This exploratory research aims to enrich the understanding over the importance of the training and development model and game for junior tennis player, top 10 ITF.

The main idea upon which this paper is based on was inspired by the models theory applied to performance in sports. Sport result, wherever we position it in the modern competitive landscape is not unintentional.

2. Premises:

- in tennis, the application of modelling, scientific research method and operational instrument can contribute to obtaining the established performances;
- the training process will be more efficient and can improve the performance capability, if the preparation is designed, based upon the requirements of the game model;
- performance does not come from a cluster of facts and events, but is the product of effects determined by concentrated action of objective and subjective factors;

- junior female players of the "Generation 2011" can satisfy the average values of top ITF players, remaining to be determined to which extent and at what level.

3. Purpose:

- highlighting important issues regarding training and game model for the junior tennis player, top ITF;
- fully justify the importance of the process model training method to obtain superior performance in tennis;
- finding which junior female players in our country can be compared to the players in the "Generation 2000", in order to forecast the future of national tennis;
- strengthening and improving the training and game model for junior female players in our country by establishing the action methodology with means and methods included in the organization, management and development of the process of the game of tennis.

4. Objectives

Main objectives:

1. establishment of the training and game model (descriptive) for the top national junior tennis player;
2. experimenting the proposed model on a sample of 31 top national junior tennis players (experimental group).

Secondary objectives:

1. elaboration of the training and competition model for the players included in the research;
 2. biometric potential objectification for the top junior tennis players;
 3. elaboration of the descriptive-compared model with international top female players;
 4. applying the proposed model in an experiment that addresses the top junior tennis players.
5. Hypothesis
 - a) Inductive hypothesis:

□ Developing the training and game model for the junior tennis player, top 10 ITF is an important milestone for optimizing performance capacity by conducting scientific training and participation in competitions.

b) deductive hypothesis:

1. the objectification and analysis of the preparation and contests highlights the real performance potential, that may represent the descriptive model and the information basis for establishing the subsequent preparation and positioning model for the players in the experiment group within the first 30, within the national ranking;

2. association, in the training process, of methods, means and procedures specific to technical and tactical tennis based upon a special program developed, syllogised and scientifically applied, can influence similar results;

3. if the participation at competitions is finalised with the accession to higher stages, due to improved specific processes for the tennis game, then remarkable effects will take place in the manner of approaching to games with opponents better ranked as value;

4. the existence of some statistical correlations, represented by the previous game model, make the new model, that we want to draft to be oriented towards adequate motivation for the achievement of superior sports performance, due to improvement of the technique and tactics of the game.

Research Methods:

- pedagogic observation method
- investigation method
- analogy method
- model and modelling method
- pedagogical experiment method
- mathematical-statistical method
- computer-graphic method

Experimental research conclusions for improving the preparation of tennis players - juniors, top 10 ITF

Contests played by subjects in the experimental group are fewer compared with those played by subjects preliminary research group ("Generation 2000"), which shows the differences between these groups, the places occupied in the national rankings, especially international ones (ITF).

The verification of these subjects was done in the completion year 2011, from where we extracted the following:

- number of participations in competitions;
- stages reached by female players in competitions;
- points obtained;
- expression thereof in tables and graphics, that show the curves of these stages as well as their annual percentage.

Participation at competitions fluctuated, the first 31 players (experimental group) having a stronger presence both in national competitions (14, 16 and 18), senior and junior ITF compared to the control group (the next 31 players).

CONCLUSIONS AND RECOMMENDATIONS

1. Theoretical conclusion

Development of preparation and game models is particularly important for theory and for the practical area of the field.

In the activity they perform, coaches are faced with practical realities of being obliged to work with many types of models and modelling. This is due to the exact real purpose for constructing a game model that can represent, explain and discover the factors that move the the development of the original or that may have a didactical character or scientific particularly useful in the preparation of the athlete.

In this context, we considered that, as a PhD, is natural to design a work that starts from the knowledge already acquired, as a practitioner of the sport and subsequently as coach at junior and senior level.

Therefore, the main reason which caused the approach of the present work was the need to bring effectively a notable contribution to the development of the junior game model, and it ends a strictly practical value.

Our approach involved the overlap of very serious investigations or studies suggested by the doctoral supervisor, prof. Dr. Ioan C. Negulescu, and achieved in practice with the help of tennis professionals, with which we have consulted directly (with the help of questionnaires destined for coaches' opinion) or indirectly (the coaches of junior players).

Practical and methodical conclusions

1. The game model represent a scientific - methodical concept underlining the profile and type of junior player and that has as basis the somatic - functional, psych – motor and technical – tactical development stage;

2. From the study of the best players within WTA parameters as well as national ranking, results the fact that our junior players may obtain success as important in direct competitions, indistinctively of the their anthropometric specificities, that may be compensated by technique and tactics (for example Justine Henin, Martina Hingis and Simona Halep);

3. From our data, based upon the observations and the collection of data over large competitions (Grand Slam tournaments of - WTA, Masters Series), international and national, as well as from those at junior level, the existence of a preparation and game model appears as an objective necessity offering tennis specialists the access to information and analysis thereof, at an operative and professional manner of thought, these contributing to the establishment of a modern and efficient concept, in order to avoid the errors in the preparation and game process, and bringing the juniors a plus of safety and equilibrium in official competitions;

4. At physical preparation tests, the final results extend, by an average of 3,42%, the most important being registers at the test of abdominal strength, back strength where t calculated has a larger value for the back test and the difference is significant statistically, with 8,07%, $p \leq 0.05$, between the experimental group and the control one;

5. The results registered in the game of tennis, significant statistically at forehand (0,56; $t = 4,67$) and backhand (0,54; $t = 4,41$), and $p \leq 0.05$ confirm the undertaking of some new procedures in preparing juniors;

6. Comparison of results obtained by the two groups, during final tests, had the purpose of verifying the efficiency of the proposed preparation methods and applied within the experiment. From the analysis of the results obtained, we observe that there are significant differences, from a statistical stand point, with 20 tests out of 22, the percentage representing 91%. The two tests for which the differences are not significant represent 9% and are:

- 60 sec. plyometric jumps;
- Added step.

After the verification of the statistical hypothesis with the parametrical test t bilaterally dependant, is has been accepted the hypothesis of null for the two tests mentioned above, the significance stage (p) calculated for these being over 0.05;

7. The motivation for performance of our junior players is related to the method in which they are preoccupied by the time given to preparation and further on its expression in contests;

2 Recommendations

1. In order to become unique for all our technicians the preparation and game method must firstly be presented and analysed by the College of Referees and further on generally applied in practice. Of course this operation will imply some corrections or adjustments of the realised project.

2. It is important to recognize that the motivation of the junior players for achieving performance represents the „key” standing at the basis thereof.

3. The action system must have as base the element and procedures from the techniques of the tennis game, that will be redirected towards efficiency of the preparation method (training) and then towards the completion (game).

4. All data necessary for the construction of the preparation model must be provided by integrative game models, that may determine its essence and must contain the following operations:

- Establishment of instruction objectives;
- Programming the instruction;
- Training and game strategy;
- Planning the activity in stages of preparation;
- Evaluating thereof through competitions.

5. Through the practical aspects that dominate the training process is necessary the existence of a series of priorities within the favoured factors of training and game, such as:

- Perfecting the selection strategy, approached by considering the moulding theory;
- Increase of volume and intensity of effort in trainings;
- Establishing a strong bond between the content and method of training with the requirements of the tennis game;
- Incrementing the social echo of performance tennis;
- Scientific training direction.

To this end we consider that the model we have obtained subsequent to research may be used as reference system in preparing the junior player in our country.