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## МЕТОДОЛОГІЯ ОСВІТИ ГРАВЦІВ У ТЕНІС НА ПОЧАТКОВОМУ ЕТАПІ НАВЧАННЯ

У цій статті розглядається система підготовки тенісистів на початковій стадії на основі детермінації та аргументації змісту програми “Tennis 10s”, що запропонована Міжнародною федерацією тенісу. Завдяки застосуванню наукового підходу щодо базових концепцій підготовки тенісистів на початковій стадії тренування було проведено спробу висвітлити думку тренерів щодо теми, що досліджується. Практична цінність дослідження полягає у визначенні та аргументації ефективності системи навчання та методології виховання тенісистів на початковому етапі навчання на основі отриманих практичних результатів на соматичних, рухових та тактичних показниках. Ця робота пов'язана з тим, що концепції програми “Tennis 10s” використовувалися у навчанні, освітньому процесі молодих тенісистів. Забезпечивши дітям можливість грати з м'ячами, ракетками на відповідних етапах рухового та соматичного рівня підготовки, було створено сприятливі умови для реєстрації позитивних результатів при проведенні технічних випробувань. Таким чином, необхідний і дуже важливий етап підготовки та навчання дітей до 10 років на рівнях. Отже, були виділені переваги, ефективність та значення програми “Tennis 10s”.

**Ключові слова:** методологія, освіта, фаза тренування, початкова фаза, тренувальний процес, спортивна підготовка, теніс, тенісисти.

*In this article is examined the training system of refinement problem of tennis players at the initial phase, based on determination and program content argumentation “Tennis 10s”, proposed by the International Tennis Federation. Through the approach of a scientific content regarding basic concepts of tennis players' training at the initial training phase was carried on the attempt to highlight the coaches' opinions regarding the researched topic. The practical value of the investigation consists in determination and argumentation of training system efficiency and methodology of tennis players' education at the initial training phase, on the base of gained practical results at the somatic, motional and tactical indices. This work is due to the fact that were used the program's concepts reasonably “Tennis 10 s” in the training, education process of the younger tennis players. Affording to children the possibility to play with balls, rackets and on proper areas of motional and somatic training level, it was created the favorable situation for the registration of positive results at the technical tests. Thus, the phasing training and education process of the children till 10 years on levels is necessary and very important. Consequently, the advantages, efficiency and importance of program “Tennis 10 s” were highlighted.*

**Key words:** methodology, education, training phase, initial phase, training process, sports training, tennis, tennis players, the content of program.

**The actuality.** The sport represents one of the most social, dynamic activities that has as goal the human being improvement. That's why appeared as justified the specialists' preoccupation on executing periodically the out look analysis, as a goal of currents' discovery of its evolution with performance sports priority and athletes' training system.

The system quality of the tennis players training of the age till 10 years has a very big importance. At the initial training phase are placed the development bases and technical, tactical physical education etc. of the future tennis player.

Recently on global level, the mass development problem of tennis and effective and appropriate training of children till 10 years old was discussed within conferences, seminars and researches. Therefore, has appeared the program “Tennis 10s”, which is a new program of The Tennis International Federation meant to the children till 10 years old, implemented in Romania and The Republic of Moldova.

The program is supported through the official modifications executed by ITF in regulation, which prohibit the organization of contests with standard balls, on the areas of standard dimensions, for the children till 10 years old, beginning with 2012 year.

Analyzing the specialized literature of specialty [1, 2, 3, 4, 5, 6, 7], we scientifically underlined the research and convinced that the quality of training system of beginner players

is very important and made the conclusion that the training methodology “tennis 10 s” of tennis players at the initial training phase has an intensified degree of importance, having as a goal the harmonious, efficient and right development of the children till 10 years old.

Thus, the actuality of topic chosen by me is very big and relates to modern tendencies in the education domain of tennis players at the initial training phase.

**The research hypothesis.** It was proposed that the application in practice of program content “tennis 10s”, will contribute to the improvement of the younger tennis players’ results, pointing out the training methodology efficiency and confirming the methods and concepts of domain.

**The purpose of research** consists in the development of the tennis players training system at the initial training phase, in the base of program content argumentation and determination “Tennis 10s” proposed by the Tennis International Federation.

**The aims of research.** For the achievement of formulated purpose it were proposed the next aims: 1. Concepts’ analysis regarding the theory and practice of the tennis players training system. 2. The level appreciation of the tennis players’ training at the initial training phase. 3. The prominence and determination of the elements of tennis players training till 10 years old, through the continuous implementation of the tennis players training concepts and methodology at the initial training stage “tennis 10 s”. 4. The theoretical-methodical argumentation of the tennis players training system till 10 years old.

**The subjects of research.** As subjects within executed researches have evolved the tennis players with an age till 10 years old who activates within the Republican Tennis Specialized Sports School from Chisinau.

**The experimental basis** of the researches was represented by the specialized grounds and sports halls for tennis game, sports equipment and inventory for measurements and recordings within the Republican Tennis Specialized Sports School from Chisinau.

For the elaboration of this research it was realized a complex methodological processing for the examination of different aspects regarding system content of tennis players training generally, focusing on the training system of tennis players with an age till 10 years old and also focusing on the concepts and methodology of tennis players training at the initial training phase, supported and implemented by the tennis international federation – “tennis 10 s”.

For the realization of proposed tasks, it were used general and specific methods of physical education and sports domain: the analysis of specialty literature; the method of pedagogical observation, the inquiry as a sort of questionnaire; the testing of somatic development; the testing of motional training; the testing of technical training; the pedagogical experiment; the comparative method; the statistical- mathematical method of the dates process.

**The research organization and evolution.** The research took place within Republican Tennis Specialized Sports School from Chisinau. The research consisted in three phases, as follows :

The first phase took place in the interval may–august 2014 and comprised the selection from specialty bibliography of materials that contain aspects regarding the proposed topic for the research and sociological questionnaire.

The second phase took place in the period September 2014 – august 2015. It took place the proper experiment with the experimental group, it was done the measures of somatic, motional and technical indices over the sample of comprised subjects in this research.

The third phase consisted in the research completion, during the period September–November 2015, it was done the dates process, interpretation and comparison.

**The research results.** The sociological questionnaire had as a goal the identification and prominence of advantages, concepts implementation, tennis 10 s methodology in the

training system of tennis players at the initial training phase, the identification of coaches attitude regarding the tennis 10s program and also the degree importance of this program for younger athletes.

The results of questionnaire demonstrated that coaches have a positive attitude beyond the tennis 10 s program, the methodology being practicable, having an advanced degree of efficiency and a very big importance in the training process of tennis players at the initial training phase.

After it was executed the questioning of coaches and coaches' assistants, followed the pedagogical observation and was formed the list of experimental group, composed by 25 children, which train within tennis specialized sports school.

At the next phase of the proper experiment it was realized the indices of somatic measures, its results are presented in the tabl. 1.

Table 1

**The statistics of comparative analysis, that characterizes height indicator, of different age children involved in research (n=25, 12B, 13G)**

The year of birth	Boys			Girls		
	$\bar{X} \pm m$	t	P	$\bar{X} \pm m$	t	P
2006	127,48 $\pm$ 1,24	3,20	P<0,01	126,34 $\pm$ 1,29	2,13	P<0,05
2005	133,06 $\pm$ 1,23			130,20 $\pm$ 1,28		
2004	140,08 $\pm$ 1,28	3,96	P<0,01	136,52 $\pm$ 1,26	3,53	P<0,01

The analysis of dates regarding the height average demonstrated that the boys born in 2006 have the height average of 127,48 $\pm$ 1,24 cm, but the girls have the height average about 126,34 $\pm$ 1,29 cm. The boys born in 2005 have the height average of 133,06 $\pm$ 1,23 cm, but the girls of the same age have the height average of 130,20 $\pm$ 1,28 cm. For the boys born in 2004 the height average is about 140,08 $\pm$ 1,28 cm, but the girls about 136,52 $\pm$ 1,26 cm.

It is known that the hitting optimal extent for the right and lapel hits it is considered the interval between the hip and player's shoulder. For this we consider that we have to train the children with soft balls and small rackets, but the training phasing on levels is necessary for children till 10 years old.

Thus, analyzing the heights average of the involved children in the research, we have arrived to the conclusion that the tennis 10 s program, fits to the children height indicator, which allows us to notice that, the methodology is viable and has an increased importance degree, in the process of younger athletes training.

The next analyzed somatic indicator is the weight. In the tabl. 2 we have presented the analysis of comparative averages, which characterizes the weight indicator, of different aged children involved in the research.

Table 2

**The statistics of comparative analysis, that characterizes weight indicator, of different aged children involved in research (n=25, 12B, 13G)**

The year of birth	Boys			Girls		
	$\bar{X} \pm m$	t	P	$\bar{X} \pm m$	t	P
2006	27,11 $\pm$ 1,84	0,50	P>0,05	25,82 $\pm$ 1,23	0,98	P>0,05
2005	28,43 $\pm$ 1,90			27,53 $\pm$ 1,24		
2004	35,62 $\pm$ 1,83	2,73	P<0,05	32,63 $\pm$ 1,20	2,96	P<0,01

The gained results allow to conclude that tennis 10 s program, corresponds to the children' weight indicator. The children do not have enough strength to play with standard

balls and big rackets at this age. Consequently the children must be trained with soft balls and small rackets, and the training phasing on levels is necessary for the children till 10 years old.

The results analysis gained by involved subjects in the research, at the somatic development demonstrated that tennis 10 s program is very important in the training process of tennis players at the initial training phase, being checked with the height and weight indices offering to the children the possibility to grow technical and physical, more harmonious and faster etc. The somatic height indicator at the boys and girls represents a meaningful growth  $P < 0,01$ , while the weight one at the boys represents a meaningful growth with  $P < 0,05$ , but at the girls with  $P < 0,01$ .

In conclusion, we mention the fact that the measurement's results of somatic indices have demonstrated, that the tennis 10s program is very important in the training process of tennis players at the initial stage, being correlated with the height and weight indices, offering to the children the possibility to grow technical and physical more harmonious and faster etc.

Because in the contemporary methodology of scientific research, the indices motional testing for the majority of sports frames are realized through a system of samples and control norms established at the national and international level by the specialty federations as follows: Running speed (30 m); long jump from standstill; throwing the Oina' ball.

These applied events have permitted to gain concrete dates regarding the level of motional development and physical training of the subjects involved in the research sample.

The first realized control event was the speed running 30 m. This event was executed with start "standing", timed in the same conditions: at the movement from the back, from two attempts it was considered the best time.

The statistics of comparative analysis, at the speed running 30 m, of the children of different ages involved in research is presented in the chart 3. From presented dates in the chart it can be noticed that during the period of research, the boys from all age categories have registered better results than the girls with an insignificant growth  $P > 0,05$  (tabl. 3).

Table 3

**The statistics of comparative analysis, at the speed running 30 m, of the children of different ages involved in research (n=25, 12B, 13G)**

Year of birth	Boys			girls		
	$\bar{X} \pm m$	t	P	$\bar{X} \pm m$	t	P
2006	6,075 $\pm$ 0,18	1,33	$P > 0,05$	6,125 $\pm$ 0,16	1,30	$P > 0,05$
2005	5,75 $\pm$ 0,17			5,825 $\pm$ 0,18		
2004	5,4 $\pm$ 0,16	1,52	$P > 0,05$	5,56 $\pm$ 0,17	1,10	$P > 0,05$

The next control test performed was the long jump from standstill. This kind of jump test was used in order to measure the feet expansion. The test was performed as follows: the subject after a moose, consisting of bending-stretching knees and swinging arms attached to the trunk (back, forward), made a sudden thrust and detachment on both feet. The physical exercise highlights not only the legs expansion, but also coordination of all movements.

The comparative analysis of averages, for the jump in length, of different aged children included in the research is presented in Table 4. From the table it can be observed that for all ages the boys results at jumps in length have a significant increase  $P < 0,05$ , but girls  $P < 0,01$  (tabl. 4).

The next control test was realized by throwing the "Oina" ball. This test is designed to measure upper limb explosive force, requiring concomitant indicators of force, speed of execution, coordination, etc., that materializes the explosive potentiality of the arm.

Table 4

**The averages comparative analysis, for the jump in length, of different aged children included in the research (n = 25, 12B, 13G)**

Year of birth	Boys			Girls		
	$\bar{X} \pm m$	t	P	$\bar{X} \pm m$	t	P
2006	1,34±0,03	1,90	P <0,05	1,28±0,03	2,50	P<0,01
2005	1,42±0,03			1,37±0,02		
2004	1,51±0,02	2,50	P<0,05	1,48±0,03	3,05	P<0,01

The comparative analysis of averages, from throwing the “Oina” ball, of different aged children included in the research is presented in Table 5. Thus the methods and concepts “Tennis 10s” have a high degree of efficiency practice by highlighting a set of advantages. Therefore, the program is very important in the education of children aged up to 10 years. The throwing of “Oină” ball, both boys as well as girls, the results show a significant increase  $P<0.001$ , except the ages 2006, 2005 where girls had  $P<0.05$  (tabl. 5).

Table 5

**The comparative analysis of averages, from throwing the “Oina” ball, of different aged children included in the research (n=25, 12B, 13G)**

Year of birth	Boys			Girls		
	$\bar{X} \pm m$	t	P	$\bar{X} \pm m$	t	P
2006	15,25±0,53	4,37	P<0,001	10,5±0,46	2,34	P<0,05
2005	18,75±0,60			12,0±0,45		
2004	21,75±0,50	3,84	P<0,001	14,78±0,43	4,48	P<0,001

Eventually, following motional indicators, we concluded that children must necessarily play on small fields, with small rockets and soft balls. The level of physical and motion development at this age does not allow children to play technically correct, tactically with standard balls, with big rockets and on great large areas.

The division of the training process, of tennis players up to 10 years, on red, orange and green levels is mandatory. We believe that during the training, children develop physically, obtaining strength, speed, etc., in other words “grow” with age, respectively the tennis “grows” also.

Thus, methods and concepts “Tennis 10s” have a high degree of practice efficiency, highlighting a set of advantages. Therefore, the program is very important in the education of children aged up to 10 years.

After being measured and analyzed, the motional indicators at the next stage of research it was switched to measuring and analyzing technical indicators of sample subjects.

In tennis, technique is important, first of all through economist and efficiency of movements made. Technical training in tennis at various stages of preparation, including the initial, should not be emphasized in isolation, because it is closely related to tactical physical and psychological preparation etc. At the initial stage of training, the child must develop in parallel both technically as well as physically and tactically. This approach will enable the problem of young tennis players to develop harmoniously and correctly.

In testing technique process of tennis players included in the research, I have noticed that the degree of children interest depends directly on technical successes. That is, the better child realizes the task at the technical level, the greater is his interest to training process. In order to get the technical task accomplished successfully and children to have increased

interest in the training process, they necessarily must play racket, tennis balls and on the fields with the appropriate level of their motional, physical and technical development,. This aspect demonstrated once again the importance of the methodology 'Tennis 10s'

In the research process it were analyzed the following technical elements of the subjects: right kick; left kick; service; right and left palm.

The first technical elements tested were left and right blows. So it was tested the passed ball placing through right and left shot in the targets set. The tested player moves near baseline (corresponding to the level of play) and hits from 50 alternating played shots (right / left) target. It is estimated by one point the achievement of the free target chosen.

Thus, the average of points obtained by the boys born in 2006 at right blow is 13 points, and the left is 10.5 points and respectively for the girls the blow at the right side is 13.25 points, and the left is 11.5 points.

The average of points got by boys born in 2005 at the right blow is 15.5 points, while the left is 14.5 points, for the girls shot from the right side is 15.75 points, and the left is 14.0 points.

For the boys born in 2004, the average of points obtained at the right blow is 18.75 points, and the left is 16.25 points; respectively for girls the right blow is 17.2 points, while the left – 15.2 points. In the Table 6 are presented the averages of points earned by the children included in the research, at the implementation of left and right blows (tabl. 6).

Table 6

**The averages of points earned by the children included in the research, at the implementation of left and right blows (n=25)**

Year of birth	Right blow boys, points	Left blow boys, points	Right blow girls, points	Left blow girls, points
2006	13	10,5	13,25	11,5
2005	15,5	14,5	15,75	14,0
2004	18,75	16,25	17,2	15,2

Another technical element tested was the service. The testing involves the service sending on hotspots. The player carries out a total of 16 services, always alternative, 2 – the right and 2 – to the left. It serves two times the target no. 1 and then twice in the target no. 3 then goes back to hitting the target right and then left No.2 hitting the target no. 4. It is appreciated reaching the target place with 2 points, hitting a corresponding rough spot with 0.5 points, unsuccessful services– 0 points.

The analysis of the results obtained at this element is shown in Table 7. So, the average of points obtained by the boys born in 2006, included in this research, at the service performance is 15.5 points, and the average of points for girls is 15.75 points.

The average of points got by the subjects born in 2005, included in this research, at the service performance is 18.0 points for boys and respectively 17.75 points for girls.

At the same index for boys born in 2004, the average of points for the service performance is 18.5 points, and the average of points for girls is 18.0 points (tabl. 7).

Table 7

**The average of points obtained by the children, included in this research, at the service performance (n=25)**

Year of birth	Service, boys, points	Service. girls, points
2006	15,5	15,75
2005	18,0	17,75
2004	18,5	18,0

The last technical element tested was right and left volley. Testing involves sending the volley ball in the designated space. The player hits the ball 50 times, alternating right and left, in the space designated. It is estimated by one point the achievement of the free chosen target.

The analysis of the results obtained at the final stage of the research is presented in Table 8. Thus, the average of points for the boys born in 2006, included in this research, the left and right boys' execution volleyball is 15.75 points and respectively girls' is 15.25 points.

For the boys born in 2005, the averages of points for a volleyball left and right execution is 18.75 points, and the average obtained by the girls included in the survey, the left and right execution volleyball is 18.25 points.

The averages of points for the boys born in 2004, included in this research, at the left and right execution volleyball is 23.75 points, and the average points for girls born in 2004, included in the survey, the execution left and right volley is 21, 2 points (tabl. 8).

Table 8

**The averages of points accumulated by the children, included in this research, at the left and right execution volleyball (n=25)**

Year of birth	Boys volley, points	Girls volley, points
2004	15,75	15,25
2003	18,75	18,25
2002	23,75	21,2

Analyzing the results obtained by the subjects included in the research, at the hints of technical preparation, we concluded that these data are quite good. Absolutely all subjects included in the research, even those of the lowest age, demonstrated a high level of technical training. This is due to the fact that the concepts used were the 'Tennis 10s' in the preparation and training of young tennis players.

By providing children the opportunity to play with balls, tennis rackets and appropriate level of somatic and motional training, we have created favorable situation for registering positive results at the technical testing.

Thus, dividing training process, training for children under 10 years on levels is mandatory and very important. Therefore, it were highlighted the advantages, efficiency and the importance of the 'Tennis 10s'.

In conclusion, we note that the results of technical training level testing, is a very important argument in favor of practical training system used, of the tennis players aged up to 10 years.

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