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INVESTIGATING TENNIS EDUCATİON IN TERMS OF TWO DIFFERENT TRAINING TECHNIQUES FOR UNIVERSITY STUDENTS IN TURKEY

INVESTIGANDO A EDUCAÇÃO DO TÊNIS EM TERMOS DE DUAS TÉCNICAS DIFERENTES DE TREINAMENTO PARA ESTUDANTES UNIVERSITÁRIOS EM TURQUIA*

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Abstract: The purpuse of this study was to ınvestıgatıng tennıs education ın terms of two dıfferent traınıng techniques for unıversity students ın turkey. Since both groups did not know tennis and the random sampling method was chosen, no preliminary tests were performed. The first group was given pieces of training using classical tennis teaching techniques. In the second group, the gamified mini tennis teaching method was used. 180 min 2 days a week. As a result, pieces of training were conducted. At the end of 10 weeks, the AOS Test results of the participants were taken and their evaluations were made with the SPSS 26.00 statistical package program. As a result, it was seen that the AOS test results of the first group (E1), the group that participated in the Classical training, were not statistically significant between the results of the second group (E2), the Gamified group. All results of the first (E1) group revealed significant differences in volley strokes. From this point of view, we can say that classical basic tennis training with adult groups is not a more effective method than gamified basic tennis training.

Keywords: Tennis Education. Traınıng Techniques. Unıversity Students.

Resumo: O objetivo deste estudo foi ınvestıgatıng tennıs educação ın termos de dois dıfferent traınıng techniques para unıversity estudantes ın peru. Como ambos os grupos não conheciam tênis e o método de amostragem aleatória foi escolhido, não foram realizados testes preliminares. O primeiro grupo recebeu treinos utilizando técnicas clássicas de ensino de tênis. No segundo grupo, foi utilizado o método de ensino de tênis mini gamified. 180 min 2 dias por semana. Como resultado, foram realizadas peças de treinamento. Ao final de 10 semanas, os resultados dos testes AOS dos participantes foram feitos e suas avaliações foram feitas com o programa do pacote estatístico SPSS 26.00. Como resultado, verificou-se que os resultados do teste AOS do primeiro grupo (E1), o grupo que participou do treinamento clássico, não foram estatisticamente significativos entre os resultados do segundo grupo (E2), o grupo Gamified. Todos os resultados do primeiro grupo (E1) revelaram diferenças significativas nas pancadas de vôlei. Deste ponto de vista, podemos dizer que o treinamento básico clássico de tênis com grupos adultos não é um método mais eficaz do que o treinamento básico de tênis Gamified.

Palavras-chave: Treinamento de tênis. Traınıng Techniques. Unıversity. Estudantes.

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1. INTRODUCTION

Sports activities are the most effective body movements and activities in both the social and individual lives of people (Şahinler & Koçyiğit, 2019). Sports are physical movements that are systematically and integrally performed by the struggles that the individual has shown in natural life. Thanks to sports, the individual learns to fight with himself, other living beings and nature first of all in nature. Sports pieces of training started in early childhood greatly support the development of children's physical structures and are also highly effective for the rest of their lives. It is certain that the participation of people of all ages in sports activities in one area of their life and being a part of their life in this will keep the person both healthier and more dynamic. In addition, the presence of sporting activity at all levels of education positively increases personal development. The attitudes of university students toward physical Education and Sports have been the subject of many academic studies, and in many of these studies, it has made positive contributions to both the academic and social lives of students taking physical education and sports courses (Alaeddinoğlu, 2020). It is seen that academic success increases together with the psychological and personality characteristics of university students who actively participate in sports activities (Yiğit, 2019). At the same time, participation in sports activities also increases entrepreneurial skills from the point of view of university students. The Buddha supports multifaceted development (Pekel, 2017). Individuals who play sports have a positive increase in nutrition patterns as well as socialization depending on the sport they do. This situation also positively affects their life satisfaction (Yılmaz, Dalbudak, & Yiğit, 2020).

The fact that sporting activities can be considered successful can be revealed either by the performance shown in a competition or by evaluation tests specific to the relevant sport. Or, when doing sports, the aesthetic movements made by the individual himself or those who watch are the reward of the pleasure and happiness he receives from Jun whole. It is these body movements that also increase performance indicators depending on the rest period (Kıyıcı & Kishalı, 2010).

The sport of tennis has changed a lot depending on the development of technology, and the performance of athletes in terms of both technical and tactical aspects has been a subject that needs to be investigated especially (Alaeddinoğlu, 2020). In order to observe the competitive performance values of the athletes and to see the effects of the pieces of training, performance improvements can be easily monitored with branch–oriented evaluation tests after the teaching

and learning activities (Kovacs, 2006). In particular, because every action performed on the court directly affects the number, it is necessary to analyze the strokes and make good technical corrections, especially in tennis (Noury, Buszard , Reid, & Farrow, 2021). The data obtained, supported by scientific studies, determine the most extreme limits of sporting performance and also provide an indication of the points to which the athlete will come in the future (Perry, 2004). The tests conducted within the profile of tennis athletes should contain many parameters and should also make it easier to make sense of complex structures (Fernandez-Fernandez, Ulbricht, & Ferrauti, 2014). In order for an athlete to make an effective shot in the sport of tennis, all physical fitness characteristics must be at the highest level. In tennis, a sport in which there is no contact with the opponent, the indicators of individual performance are Forehand, Backhand strokes, Vole and Service strokes, which are the forms of strokes that affect the entire game. However, in these techniques, the athlete; performs an action such as force, speed, flexibility and, accordingly, jumping, or stepping in the game. It is very important that all the movement actions that demonstrate successful performance in the game are measured with the correct parameters. In order for tennis players to demonstrate the knowledge they have learned, reflecting it with their racket to their opponent on the opposite court with an optimal level of flexibility, strength and continuity of strength is of great importance for winning the game. In order to increase endurance in the lower and upper extremities of the body organism, it should be carried out with continuous and competent training (Reid, Crespo, Lay, & Berry, 2007).

Learning is a change in the volitional behaviour of an individual. There are many conditions for learning to take place. At the beginning of these factors, species readiness is one of the main ones. This is the case when the learner has the necessary equipment to exhibit the desired behaviour biologically. Another factor is the maturation of the individual. This condition shows both mental and physiological development. Another factor is that the learner's individual is an important situation. Each age level has its own learning level and task (Alemdağ, Kalkavan, Alemdağ, & Özkara, 2016). Another learning factor is the state of intelligence. The age of intelligence of a learning individual is closely related to how much learning processes mental processes and how persistent learning is. Another factor affecting the learning situation is the motivation (motivation) and the nature of the anxiety state. It is necessary to evaluate the general excitability of the learning individual and the effects of the message from the learning centre on the learner. Other learning factors are found as preliminary learning, physiological factors and individual differences (Alaeddinoğlu, 2021). Due to the individual perception and physiological

state of each person, the ways of perceiving events and phenomena also differ. In this case, it reveals the importance of how much pre-learning affects the next information (Tan & Güler, 2021). Surveyed college students to read in school history in any sport and sports science, such as pre-learning of the sport will be next to be learned from other individuals present as an attribute and effective in learning learning learning faster and more lasting effect. Or, on the contrary, it will make learning difficult by making a negative transfer depending on the strength of the pre-learning.

Therefore, according to the mentioned cases, the present research is carried out with the purpose ınvestıgatıng tennıs education ın terms of two dıfferent traınıng technıques for unıversıty students ın turkey.

2. METHODOLOGY

The group participating in the study was made up of university students who took elective courses in the Coaching department of the Faculty of Sports Sciences of Ataturk University. A total of 68 students from the student day department, with an average age of 22.4 for 30 men and 4 women, and from the university student night department, with an average age of 23.0 for 30 men and 4 women, voluntarily participated in the study. It has been reported that the measurements declared that scientific purposes will be measured after the pieces of training in first pieces of training in order to ensure the course motivation of the participants is on a voluntary basis. The students who make up the research group are given two days a week, 180 min. a 10-week training program was implemented. Each group was divided into 3 different groups and the pieces of training were provided with fewer people and qualified education. Classical teaching methods were used for the students of the Coaching Day department, which is the first group. For the first two weeks, I was taught the basic technique of Forehand. In the third and fourth weeks, the basic backhand technique was taught. In the fifth week, he took part in pieces of training with combined forehand and backhand basic techniques. In the sixth week, the pieces of training started with forehand and backhand repetition and were conducted with Vole training. October the seventh week, in addition to the FH, BH and Volley, Basic Service shooting training was conducted. After the general repetition in the eighth week, the basic training of the service was carried out. In the ninth and twelfth weeks, the pieces of training were completed with combined program pieces of training. A similar training program has been

organized among the students of the Coaching Night Department depending on the same program. Educational games aimed at teaching techniques have been used in FH, BIH, Vole and Service studies. The Bell Rod, T Rod, Flying Balloon, Netted Racket, Balloon and Sea Ball developed by the researcher were used as auxiliary materials. In addition, educational games similar to basic technical strokes were used. The AOS Test developed by the International Tennis Federation (ITF) was used to analyze the data of university students participating in the study. In addition, the height of the students was measured in meters for their length and recorded in cm. Weights were recorded in kg and grams using a digital scale that can measure gram weight accuracy in measuring body weights. Dates of birth for students' ages were recorded verbally as days, months, and years. All quantitative information was recorded on the AOS test protocol sheet and the participants' signatures were obtained. In the analysis of the data, a t-test was used for independent groups and these analyses were performed with SPSS 22.00 statistical package program on the computer. As a result of Skewness and Kurtosis tests conducted to ensure that the data are in accordance with the normal distribution, it was found that they are in accordance with the normal distribution.

3. RESULTS

A comparison of the age, BKI and AOS results of the group who studied tennis and classical education with the game is given showes in table below.

Table 1. Comparison of the results of Age, BKI and AOS

		N	$\overline{X}$	S.s.	t	p
Age	Classical education	34	22,41	1,37	-1,650	,104
	Education with game	34	23,03	1,70		
BKİ	Classical education	34	23,05	2,00	-,876	,385
	Education with game	34	23,65	3,46		
FHBH Depth	Classical education	34	16,41	7,44	,184	,854
	Education with game	34	16,09	7,02		
FHBH Cross	Classical education	34	13,85	9,11	-,179	,859
	Education with game	34	14,24	8,52		
Volley	Classical education	34	16,47	4,65	2,740	,008
	Education with game	34	12,79	6,30		
Service	Classical education	34	29,41	18,09	1,379	,172
	Education with game	34	24,09	13,39		
Spider Test	Classical education	34	45,00	,00	-1,000	,325

	Education with game	34	45,12	,69		
AOS Total Score	Classical education	34	121,18	23,67	1,757	,083
	Education with game	34	111,29	22,69		
AOS in return	Classical education	34	8,88	,73	-1,331	,188
	Education with game	34	9,12	,73		

Table 2. The significance level of the examined variables

	Levene's Test for Equality of Variances				Significance				95% Confidence Interval of Difference	
	F	Sig.	t	df	One-Sided P	Two-Sided P	Mean Difference	Std. Error Difference	Lower	Upper
FH BH Depth	.077	.783	.184	66	.427	.854	.324	1.76	-3.18	3.827
			.184	65.78	.427	.854	.324	1.76	-3.18	3.827
FH BH Cross	.443	.508	-.179	66	.429	.859	-.382	2.14	-4.65	3.887
			-.179	65.71	.429	.859	-.382	2.14	-4.65	3.887
Volley	5.656	.020	2.740	66	.004	.008	3.68	1.34	.998	6.355
			2.740	60.73	.004	.008	3.68	1.34	.993	6.360
Service	1.758	.189	1.379	66	.086	.172	5.32	3.86	-2.38	13.03
			1.379	60.81	.086	.173	5.32	3.86	-2.40	13.04
AOS Total Score	.003	.960	1.757	66	.042	.083	9.88	5.62	-1.35	21.11
			1.757	65.88	.042	.083	9.88	5.62	-1.35	21.11
AOS Net Score	.156	.694	-1.331	66	.094	.188	-.235	.177	-.588	.118
			-1.331	66.00	.094	.188	-.235	.177	-.588	.118

The arithmetic mean of the age of the students in the group receiving tennis training with the classical method was 22.41, and the arithmetic average of the age of the students in the group receiving tennis training with the game was 23.03, and the differences between them were insignificant at the $p>0.05$ significance level. As a result, it can be said that there is no difference between the ages of the students in the group who received tennis training with the game and those who received classical training.

The BMI arithmetic mean of the students in the group receiving tennis training with the classical method was 23.05, and the BMI arithmetic average of the students in the group receiving tennis training with games was 23.65, and the differences between them were insignificant at the $p>0.05$ significance level. As a result, it can be said that there is no difference between the students in the group who receive tennis training with games and those who receive classical training in terms of BMI.

The FHBH Depth arithmetic mean of the students in the group receiving tennis training with the classical method was 16.41, and the FHBH Depth arithmetic mean of the students in the group receiving tennis training with games was 16.09, and the differences between them were insignificant at the $p>0.05$ significance level. As a result, it can be said that there is no difference between the students in the group who received tennis training with games and those who received classical training in terms of FHBH Depth.

The FHBH Cross arithmetic mean of the students in the group receiving tennis training with the classical method was 13.85, and the FHBH Cross arithmetic average of the students in the group receiving tennis training with the game was 14.24, and the differences between them were insignificant at the $p>0.05$ significance level. As a result, it can be said that there is no difference between the students in the group who receive tennis training with games and those who receive classical training in terms of FHBH Cross.

Vole arithmetic mean of the students in the group receiving tennis training with the classical method was 16.47, and the arithmetic mean of the students in the group receiving tennis training with games was 12.79, and the differences between them were significant at $p<0.05$ significance level. As a result, it can be said that the Vole scores of the students in the classical education group are higher than those who receive tennis with game training.

The service arithmetic mean of the students in the group receiving tennis training with the classical method was 29.41, and the service arithmetic average of the students in the group receiving tennis training with the game was 24.09, and the differences between them were insignificant at the $p>0.05$ significance level. As a result, it can be said that there is no difference between the students in the group who receive tennis training with games and those who receive classical training in terms of Service.

The Spider Test arithmetic mean of the students in the group who received tennis training with the classical method was 45.00, and the Spider Test arithmetic average of the students in the group who received tennis training with the game was 45.12, and the differences

between them were insignificant at the p>0.05 significance level. As a result, it can be said that there is no difference between the students in the group who received tennis training with the game and those who received classical training in terms of the Spider Test.

The AOS Total Score arithmetic average of the students in the group receiving tennis training with the classical method is 121.18, and the AOS Total Score arithmetic average of the students in the group receiving tennis training with games is 111.29, and it is seen that the differences between them are meaningless at the p>0.05 significance level. As a result, it can be said that there is no difference between the students in the group who received tennis training with games and those who received classical training in terms of AOS Total Score.

The AOS Equivalent arithmetic mean of the students in the group receiving tennis training with the classical method was 8.88, and the AOS Equivalent arithmetic mean of the students in the group receiving tennis training with games was 9.12, and the differences between them were insignificant at the p>0.05 significance level. As a result, it can be said that there is no difference between the students in the group who receive tennis training with games and those who receive classical training in terms of AOS Equity.

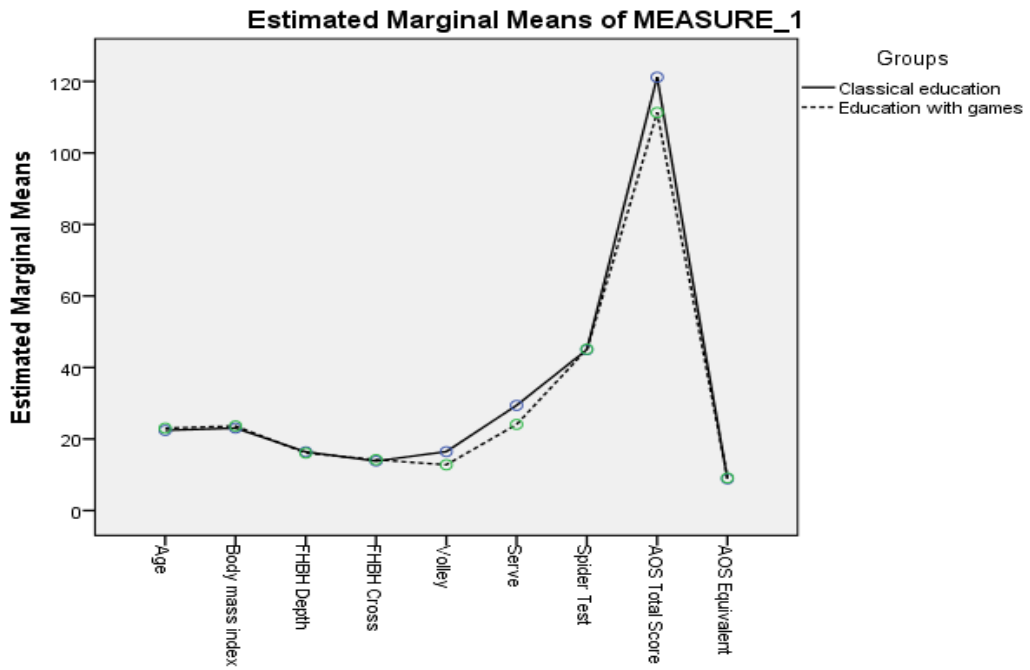

Fig 1. Average Age, BMI and AOS Points for those who received tennis training with the game and those who received classical training

They achieved close results in almost all the strokes and scores of university students who received both Classical Education and Game Education.

In addition to the individual achievements of university students, the overall scoring is statistically reflected in the gem statistical results as well as in the degree scores in which the game scores are kept. However, the AOS games total of the university students who received Classical Education achieved a score of 8.9 points. Especially in women, this condition reached a score of 8.8 AOS, they were more successful in technical strokes than the statistical effect of classical learning on AOS.

4. DISCUSSION

The average age of the students participating in Classical Education among the university students participating in the study was found to be 22.41, and the average age of the students participating in the Game Education Program was found to be 23.03. The average votes of the university students who made up the classical education group were 1.79±2 cm, and those who participated in game education were 1.77±1 cm. Tennis is a sport in which it is used cognitively, mentally and coordinatively in all aspects compared to other sports. Therefore, it is necessary to show a high level of compliance both for those who connect to training and for those who will become competitive athletes in the game. In order to be successful in the game of tennis, the biggest influencer of coordination, flexibility, strength, speed and flexibility skills is mental skills. In addition, the height, gender, weight and body mass characteristics of the individual are the characteristics that have a great influence on the game. In addition, the physical characteristics of tennis learners are structures that arise from the internal state of the individual at the level of learning. But not only these qualities alone will not be enough to learn, but also the learning situation and learning strategies also affect learning.

Schools that conduct research in all areas where learning will take place indicate that learning is influenced by both internal processes and external structures. Some learning in terms of learning according to individual interest and need of the bill is made, the individual with his or her own unique developmental features to provide integration, thus individual characteristics and differences in teaching and learning process are of great importance.

In another definition, teaching is an event that is carried out with a planned, programmed and organized education in order to make changes in the individual's behaviour in the desired

direction. In another sense, it is the acquisition of the ability to use the behaviours acquired in the learning process at the later stages of his life.

In another definition, there is a multifaceted development of the concept of learning and its affective, cognitive and psychomotor properties. There is a certain quantitative structure to each concept of learning. One cannot be less than the other or take his place. And with its continuation in a certain sequence, the learning event takes place.

There are five different situations that determine the level of learning. These are; the classical Conditioning-dependent learning state, (Operant) Conditioning-dependent Random learning state, Cognitive Learning state, Motoric Learning state and Vegetative Learning state.

Education is the entire process of challenging an individual's behaviour in the desired direction depending on life. Within these concepts, motor skill is the frequency of learning motor movements by reaching the maturity and size that an organism can do a job. Here, the concept of frequency is seen as the nature of repetitions and the equivalent of the time spent learning. Although the concept of motor skills is often compared with Psychomotor Skills, psychomotor development includes a process that continues throughout an individual's life. As for motor skills, it includes all physical and mental processes, such as a decrease and decrease in the learning level or the learning of a skill.

Education, measurement and evaluation in educational programs are important issues in terms of determining the level of learning and providing new roadmaps. There are screening tests that contain many parameters that are involved in verbal or physical movements and are a guide for researchers. Similarly, there are many tests for measuring and making sense of the learning levels of sports activities. These tests can sometimes measure a learning situation, and sometimes they can measure the entire learning situation in a general learning situation. In tennis, the measurement evaluation test AOS Test developed by the International Tennis Federation (ITF) also has a scale feature that can score the levels of both athletes and coaches depending on the strokes they hit and their playing qualities. In this test, the athlete's most basic stroke, the Forehand, can measure Backhand strokes in terms of both depth and precision. The AOS test, which is valid in the tennis literature, also stands as an effective measurement tool for determining the Vole and Service skill levels, which are the 4 basic skills of athletes.

In this research, it is aimed to evaluate the possible situation in a scientific sense about what exactly is the situation that affects the learning of Tennis sports by students after the pieces of training taken from the two basic education programs of university students. In particular, in

order to determine how much the Classical Learning-Teaching method, which is most commonly used in Tennis sports, and Game-Teaching methods affect learning, it was aimed to compare two different groups and a small contribution to science was made.

Although there is no statistical difference between the students participating in the classical training program and the students participating in the game training, the batting techniques during the practices and the techniques were tried to be fully Decoupled in the students studying with classical training during the practice strokes and clearer strokes were performed. In addition, a more practical and distance approach was taken for students studying the game compared to the arrival of balls.

Although it is individual among the learners, the fact that there are those who have taken the AOS test down to seven comes across as a good example of Dec transfer of learning. Because these university students are made up of individuals who serve as high-level athletes in their own sports as a branch.

In a research study conducted to reschedule tennis education and training programs, Tsuda et al. (2018) stated that the tools and materials used in a 14-week training program have an important place in tennis education. In particular, they noted that pieces of training conducted with 14-week comparative tasks for the reconstruction of Tennis education, especially at the first level of primary education, have an important place in the basic infrastructure (Tsuda, Ward , & Goodway, 2018). Similarly, it was very important for the literature to see if there was an educational difference in adults using the game and education program that we used in our research study. It has been observed that there is no statistically significant difference between classical education and game education in adult Decedents.

The research conducted by Reid and his colleagues has stated that tennis sport needs modern teaching methods, aimless and aimless teaching leads to the fact that there are no expectations for the future in tennis teaching. Diversification and improvement of teaching methods have shown that the time spent on education can be minimized by arousing interest and curiosity in students (Reid, Crespo, Lay, & Berry, 2007).

Crespo and his colleagues emphasized that the competencies and qualifications of tennis coaches should be developed to an international standard and stated that this would be possible with a multifaceted development. They stated that this would be possible by providing a common standard training by both local federations and the ITF (Crespo, Reid , & Miley , 2005).

In another study conducted by Yıldırım and Kızılet on the tennis skills of different training models for young people at the high school level, it was seen that the Differential learning method was effective in ground kicks compared to classical learning, and the permanence of the training did not make any difference between the two groups. Although similar results were obtained in our study, in our study, there was a significant difference in volley hits in the game training model, but no significant difference in ground kicks (Yıldırım & Kızılet, 2020).

Alaeddinoglu and Kalkavan have done the research in the study of first graders (age 7-8) level specially designed for students in a cartoon by showing viewers or the game again and it just applied a protocol (Alaeddinoglu, Tennis Games Creative for advanced level athletes and coaches, 2021)as the only players with three different levels of learning has taken to address the group. At the end of the study, there was a 60% difference in skills such as ground strokes, vole, and Decisiveness between those who played and those who only played line animation, and a 70% difference was found between those who only played and those who watched. The differences between each group were Decisively significant both statistically and visually (Alaeddinoğlu, 2019).

5. CONCLUSION

As a result, teaching methods differ due to the fact that tennis is a multifaceted sport. In our research study, learning occurred in all students who participated in the training in a 10-week training, but there is a more meaningful change in the Vole strokes of university students who learn with a game.

When conducting pieces of training, they should be planned according to the goals and objectives with a different training program at each age level. While educational games may be more effective in the 4-6 age group, these pieces of training have less effect on young people than on adults.

Especially in tennis pieces of training with adults, the classical training model is at least as effective as other training models. Pieces of training need to be planned and set up with a goal. Basic skills development and a certain amount of training time and practice are required for learners to assimilate the information they have learned.

In particular, the fact that students are interested in any sport in their past lives positively improves learning. This situation is especially evident in those who play Volleyball, Table Tennis and Football. Among the university students participating in the study, they can demonstrate their batting techniques more comfortably and in practice first, regardless of whether they are an amateur or a professional in the sport of volleyball. This means that learning the sport of tennis as an alternative sport for those involved in this sport may be effective in spreading the sport of tennis.

The fact that tennis coaches are multicultural and versatile will have a positive effect on their empathy with students in teaching and teaching techniques.

Tennis coaches and trainers need to learn many training models related to their field and be in constant research.

The provision of tennis education, especially in many academic departments providing university-level education, will make education more active and effective.

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