RESEARCH ARTICLE



How Important is Tennis Teaching in Primary and Secondary Schools? The Opinion of Teachers of Physical Education in Greece

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ABSTRACT

In many countries around the world, tennis is taught in schools. Is Greece ready to introduce the teaching of tennis in both primary and secondary education? Physical education teachers from all over the country answered this question after first attending a seminar that would help them teach the sport of tennis in their schools. Our research had two objectives. The first objective was to evaluate the seminar by the physical education teachers, and the second objective was to find out if they think tennis can be added to the physical education curriculum at school. The results of our study for the first purpose, which was to evaluate the seminar they attended, showed that physical education teachers were very positive in their response, with a percentage of 51.3% agreed and a completely agreed percentage of 43.2%. For the second objective, if they think tennis can be added to the physical education curriculum at school, the answers showed us a high percentage of 53,4% "Agree" and 34,9% "Strongly agree." The results of our study showed in all the responses that physical education teachers "Agree" to all the questions with a percentage of 52.3% and "Strongly agree" with a percentage of 39.1%. Only 7% selected "Neither agree nor disagree," 0.5% selected "Disagree," and 1.1% selected "Strongly disagree." This showed us that almost everyone was positive about both the seminar project and the teaching of tennis in the school. So, we believe that ways should be found to implement the project, which has only profit to offer to both students and teachers.

Keywords: Physical education, primary schools, secondary schools, tennis.

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1. Introduction

In recent years, the sport of tennis has been on the rise in Greece. More and more people are beginning to know and be taught about it. In 2007, the ITF officially launched a global campaign aimed at increasing tennis participation worldwide (ITF, 2007). The Tennis Play and Stay campaign aimed to promote tennis as easy, fun, and healthy and to ensure all starter players are able to serve, rally, and score from their first lesson. This program was also implemented in Greece from the first moment. The results are obvious. The way of teaching and learning has changed radically.

The global priority outlined for students of the game is to understand and appreciate the tactical nature of tennis, develop a sense of the game, and learn practical competencies (Unierzyski & Crespo, 2007). Many researchers studied the way of teaching both in the sport of tennis and in school before the program was officially implemented. So, Werner et al. (1996) said that there is more than one way to teach games, and it may not be necessary to separate skill development from gameplay. This provides insight into the future of game teaching in public schools.

The "core assumption," according to Stean and Holt (2000), was that games are enjoyable both during practice and competition, while exercises are uninteresting. In order to help coaches increase kids' enjoyment in youth sports, the conceptual framework from Teaching Games for Understanding (Bunker & Thorpe, 1982) is provided.

Thorpe and Dent (1999) said that the traditional coaching method of directing the player towards the correct technique and tactics can often hold back the talented player and may not be effective for others. A more successful method of coaching can be utilized by facilitating and challenging the player's discovery of the game and assisting them in their learning rather than directly showing and telling them how the game is played. The key issue in coaching is to appreciate how the learner learns before you start to coach.

In addition to appearing to be effective in tennis, the "new" practice has gained acceptance among physical education instructors worldwide (Griffin et al., 1997; Turner et al., 2001). Many studies confirmed that tennis players who receive coaching based on the tactical method perform better in games and possess more specialized knowledge than players who receive coaching based on the traditional approach (McPherson, 1991; McPherson & French, 1991; Turner, 2003). The usage of adapted games is crucial, as noted by Wright et al. (2005). These games allow for increased gaming, cognitive engagement, interest stimulation, and the ability for students to transfer knowledge from one game to another.

2. Methods

Based on the Play and Stay program, a selection of basic exercises was made that can be applied to all ages from 6 to 18 included in the school classes with a degree of difficulty depending on the class and the age of the students. After the program was tested in school classrooms for all ages and grades, seminars followed for physical education teachers throughout Greece.

On the day of the seminar, it took place the presentation of Play and Stay (adapted for schools) and the presentation of a game-centered learning method (Play tennis progressions) with customized racing formats and games consisting of the necessary equipment in a detailed program for 10 training sessions.

The aim was for students to gain experiences from sports that they would not have the opportunity to experience outside of school and to engage in them in the cases that they deem fit their abilities and particular inclinations.

At the end of the seminars, the physical education teachers were informed that they would be given a questionnaire that would be completed voluntarily and anonymously. The questionnaire included 12 questions, and each answer had 5 levels: Strongly disagree, Disagree, Neither agree nor disagree, Agree, and Strongly agree. The questions to be answered were the following:

- 1. The seminar was well organized and structured.
- 2. The content of the seminar was interesting.
- 3. The seminar was relevant to my work.
- 4. The seminar met my expectations.
- 5. The presentation was understandable.
- 6. The materials used for the seminar were adequate.
- 7. The seminar contributed to the development of my reflection on the introduction of tennis in the school.
- 8. The knowledge I gained from the seminar will be useful in my future professional activity.
- 9. I will use the knowledge I gained in practice at my school.
- 10. The seminar will help me in my school lessons.
- 11. Teaching tennis at school will help students gain a more positive attitude toward PE.
- 12. I believe that tennis should be added to the physical education curriculum at school.

A total of 396 questionnaires were collected from all the seminars held around Greece to provide sufficient information in the text or by reference to other work to permit the submitted work to be repeated without the need to communicate with the authors. Relevant validity and reliability data should be provided for critical methods. State the type of statistical tests used. Include the number of observations and the statistical findings when appropriate.

3. RESULTS AND DISCUSSION

Our research had two objectives. The first objective was to evaluate the seminar by the physical education teachers, and the second objective was to find out if they think tennis can be added to the physical education curriculum at school.

As we saw the results in Tables I and II and Fig. 1, the analysis of variance showed a statistically significant interaction of the factors with $(F_{194, 27} = 0.001 \text{ P} < 0.05)$ and in all the responses, physical

TABLE I: THE ANSWERS OF THE PHYSICAL EDUCATION TEACHERS

Question	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
1. The seminar was well organized and structured.	4	0	0	244	148
2. The content of the seminar was interesting.	4	0	4	212	176
3. The seminar was relevant to my work.	4	16	44	188	144
4. The seminar met my expectations.	4	0	28	232	132
5. The presentation was understandable.	4	0	4	188	200
6. The materials used for the seminar were adequate.	4	0	8	156	228
7. The seminar contributed to the development of my reflections on the introduction of tennis in the school.	8	0	20	244	144
The knowledge I gained from the seminar will be useful in my future professional activity.	4	4	52	196	140
9. I will use the knowledge in my school.	4	4	52	228	108
10. The seminar will help me in my school lessons.	4	0	36	228	128
11. Teaching tennis at school will help students gain a more positive attitude toward PE.	8	0	20	212	156
 I believe that tennis should be added to the physical education curriculum at school. 	0	0	64	180	152

TABLE II: DESCRIPTIVE STATISTICS OF THE ANSWERS OF THE PHYSICAL EDUCATION TEACHERS

	N	Min	Max	Mean	Std. Dev.
Strongly disagree	12	0	8	4.33	2.06
Disagree	12	0	16	2.00	4.67
Neither agree nor disagree	12	0	64	27.67	21.80
Agree	12	156	244	207.33	25.91
Strongly agree	12	108	228	154.67	32.73

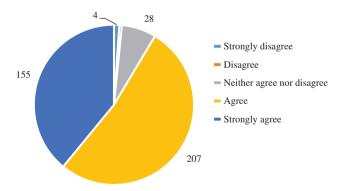


Fig. 1. The answers of the physical education teachers ($F_{194, 27} = 0.001$, P < 0.05).

education teachers "Agreed" to all the questions with a percentage of 52.3% and "Strongly agreed" with a percentage of 39.1%. Only 7% selected "Neither agree nor disagree," 0.5% selected "Disagree," and 1.1% selected "Strongly disagree" that statement. This showed us that almost everyone was positive about both the seminar project and the teaching of tennis in the school.

Questions 1-6 referred to the first objective. The answers to the first question, whether the seminar was well organized and structured, were 244 "Agree," with 62%, 148 "Strongly agree," with 37%, and 4 "Strongly disagree" with 1%. This means that the majority were satisfied with the organization of the seminar, which first contained a theoretical part, with a presentation and explanation of the exercises and the content of the seminar. Then followed the practical part, in which everyone participated. So, their view of the seminar was important since they had the opportunity to put themselves in the shoes of the students and experience the exercises better so that they could transfer them to their school.

The answers to the second question, whether the content of the seminar was interesting, were 212 "Agree" with 54%, 176 "Strongly agree" with 44%, 4 "Strongly disagree" with 1%, and 4 "Neither agree nor disagree" with 1%. The results of this question showed that the participants found the seminar content interesting to a high degree. The exercises contained joy, continuous activity, variety, and competition, giving the feeling of improvement and success in a short period of time, elements that attract students. It allows flexibility for large or small groups of students to participate and supports inclusive collaboration and participation of both genders.

The answers to the third question, whether the seminar was relevant to their work, were 188 "Agree" with 48%, 144 "Strongly agree" with 36%, 44 "Neither agree nor disagree" with 11%, 16 "Disagree" with 4% and 4 "Strongly disagree" with 1%, showed us that most physical education teachers found the seminar relevant to the teaching contents of their courses. This is explained because basic tennis skills (such as ball throwing, catching, running, balance, and jumping) help to better learn motor skills, creating rapid development of the muscular joint, reaction time, agility, and speed of movement. All these are elements that every physical education teacher tries to develop in his students through his lessons.

The answers to the fourth question, whether the seminar met their expectations, were 232 "Agree" with 59%, 132 "Strongly agree" with 33%, 28 "Neither agree nor disagree" with 7%, and 4 "Strongly disagree" with 1% which means that the majority were satisfied with what they expected to see, hear, and do from the seminar. In this question, we saw that 92% of physical education teachers answered positively, which means that the participants attended and participated in a seminar that created an excellent environment with safety, entertainment, and fun, with motivation and challenge, creating friendship and competition within the group.

The answers to the fifth question, whether the presentation was understandable, were 188 "Agree" with 47%, 200 "Strongly agree" with 51%, 4 "Strongly disagree" with 1%, and 4 "Neither agree nor disagree" with 1%. The responses showed that almost all physical education teachers understood the presentation of the seminar. As mentioned at the beginning, the seminar was theoretical and then practical, with the physical education teachers themselves participating in practice. So, their participation in practice enabled them to understand the content of the exercises and the sequence and progression of the planned lessons, with the main goal of having a progressive improvement in learning the sport of tennis.

The answers to the sixth question, whether the materials used for the seminar were adequate, were "Agree" 228 with 58%, "Strongly agree" 156 with 39%, "Neither agree nor disagree" 8 with 2%, and "Strongly disagree" 4 with 1%. This means that the majority of the participants answered positively 97%. This is because the equipment used for the implementation of the seminar was complete and contained the following: mini tennis nets, rackets suitable for all ages, balls of all kinds (red-orange, green), lines for creating the courts, and cones. Also, the benefits for children of using lighter rackets on smaller courts with lighter balls were explained (Elliott, 1981; Farrow & Reid, 2010; Groppel, 1977; Hammond & Smith, 2006). Furthermore, a lower-compression ball moves slower through the air and bounces lower than a standard ball, which appears to allow learners to strike the ball with better technique and with more power without the fear of the ball traveling out of court (Farrow & Reid, 2010; Hammond & Smith, 2006).

Then, as we saw in the results of the first objective (questions 1-6) presented in Table III and Fig. 2, the answers of the teachers were positive to a high degree, with a percentage of 51.3% agreed and completely agreed in a percentage of 43.2%. Only 3.7% selected "Neither agree nor disagree," 0.7% selected "Disagree," and 1% selected "Strongly disagree" that statement. This showed us that the physical education teachers responded very positively about the content of the seminar and the knowledge they gained from it. Also, the physical education teachers understood and felt a difference in their participation in the seminar in relation to the other sports taught in the school. This difference is explained by the fact that it becomes an activity that gives a special joy to participation and learning in the sport of tennis because both students and teachers play a sport that they have not been given the opportunity to play in everyday life. The amount of enthusiasm with which the tennis program was received by both the children and their teachers testifies to its importance. Further analyses of variance showed a statistically significant interaction of the factors with ($F_{85,454} = 0.001$, P < 0.05).

Questions 7–12 referred to the second objective, which was to find out if they think tennis can be added to the physical education curriculum at school.

The physical education teachers' responses to the seventh question, whether the seminar contributed to the development of their reflection on the introduction of tennis in the school, "Agree" 244 with 57%, "Strongly agree" 144 with 365, "Neither agree nor disagree" 20 with 5%, and 8 "Strongly disagree" with 2%, which showed us that the respondents in a high percentage progressed positively for the

TABLE III: DESCRIPTIVE STATISTICS OF THE ANSWERS 1-6 OF THE PHYSICAL EDUCATION TEACHER

	N	Mean	Std. Dev.
Strongly disagree	6	4.00	0.00
Disagree	6	2.67	6.53
Neither agree nor disagree	6	14.67	17.50
Agree	6	203.33	32.44
Strongly agree	6	171.33	37.13

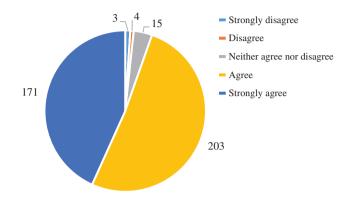


Fig. 2. The answers 1–6 of the physical education teachers ($F_{85, 454} = 0.001$, P < 0.05).

introduction of tennis in the school. This can be explained because the introduction of tennis in school develops not only physical skills but also intellectual and emotional skills, such as the development of self-confidence through play and fun, the development of imagination and creativity, and also the development of concentration and attention. Another important factor is the social skills that are developed by playing tennis at school, such as respect for their classmates and discipline that teaches them to be responsible in the school society.

The answers to the eighth question, whether the knowledge they gained from the seminar will be useful in their future professional activity, were "Agree" 196 with 50%, "Strongly agree" 140 with 35%, "Neither agree nor disagree" 52 with 13%, "Disagree" 4 with 1%, and "Strongly disagree" 4 with 1%. This means that the majority answered positively, with a percentage of 85%. This can be explained in two ways. The first is that by attending the seminar, both the theoretical part and the practical part, the physical education teachers felt ready to be able to transfer their knowledge to the school to carry out tennis lessons to their students in both grades and primary and secondary education. We must not forget that physical education teachers are above all pedagogues, which means that they can easily transfer the implementation of the tennis program to the school. The second reason is that by attending the seminar, many physical education teachers who did not know the sport of tennis were given the opportunity and want to do it themselves in the future by going to a club.

The answers to the ninth question, whether they use the knowledge from the seminar in their school, were "Agree" 228 with 58%, "Strongly agree" 108 with 27%, "Neither agree nor disagree" 52 with 13%, "Disagree" 4 with 1%, and "Strongly disagree" 4 with 1%. In the majority, the answers were positive, which showed us that physical education teachers try to implement tennis teaching in their schools. Several seemed troubled in their answers to this question, with a percentage of 13%, and the reason was mainly the fear of finding the material to implement the course. As we know, in many schools there is indeed difficulty in finding materials and much more materials for the introduction of tennis in the school. But when someone wants to make it happen, they find solutions. Thus, at the initial stage, exercises can be performed without mini nets but simply with lines in the space. With an elastic workband, mini nets can be created. The second problem is rackets. And here there is an easy solution: ask the students to bring any kind of racket they have at home or a relative, a tennis racket or even a wooden one. So, there are simple solutions to enable teachers to implement the tennis program at school.

The answers to the tenth question, whether the seminar will help them in their school lesson, were "Agree" 228 with 58%, "Strongly agree" 128 with 32%, "Neither agree nor disagree" 36 with 9%, and "Strongly disagree" 4 with 1%, which means that most physical education teachers recognized the usefulness and importance of tennis, so they would like to transfer it to their course. As we have mentioned, tennis is taught in a playful way. At the school, student classes consist of 25 to 30 students. The importance of the tennis lesson is that all students simultaneously play in pairs, creating situations of cooperation as well as competition, without losing valuable time. It meets the needs and abilities of all students, with the physical education teacher having the flexibility to harmonize the exercises according to the level and age of the students. It supports both genders, giving the opportunity for boys and girls to play together. Finally, it gives students the opportunity for creative and energetic activity in the physical education class.

The answers to the eleventh question, whether teaching tennis at school will help students gain a more positive attitude toward PE, were "Agree" 212 with 54%, "Strongly agree" 156 with 39%, "Neither agree nor disagree" 20 with 5% and "Strongly disagree" 8 with 2%. The results of this question showed that the participants found, at a high rate, that teaching tennis in their school will be very important for their students' positive perception of the physical education course. First of all, it gives students the opportunity to experience a sport within the school, which may be the one they will be involved with for the rest of their lives. Second, it facilitates participation in physical activity through a playful format for students to develop basic skills. Third, it helps students to work together and, through the game of tennis, encourages them to lead a physically active lifestyle. Finally, supports the delivery of a high-quality Physical Education program.

The answers to the twelfth question, if they believe that tennis should be added to the physical education curriculum at school, were "Agree" 180 with 46%, "Strongly agree" 152 with 38%, and "Neither agree nor disagree" 64 with 16%, which means that the majority of the physical education teachers answered positively to the key question about the introduction of tennis in the school, with a percentage of 84%. This positivity translates into a different way of approaching the subject at school, incorporating something new, which is tennis. And this can happen because now the sport of tennis has entered every home, which makes it easier to attract more students to take up it.

As we saw from Table IV and Fig. 3, questions 7-12 mentioned in the evaluation of the seminar, which was our second objective, showed us a high percentage of 53,4% "Agree" and 34,9% "Strongly agree." Only 10.3% selected "Neither agree nor disagree," 0.3% selected "Disagree," and 1.1% selected "Strongly disagree," that statement which means that physical education teachers think tennis can be added to the physical education curriculum at school. Further analyses of variance showed a statistically significant interaction of the factors with ($F_{194,87} = 0.001 P < 0.05$). This tendency of 10.3% selected "Neither agree nor disagree" may be explained by the participants' fear that they will not be able to teach tennis at school for various reasons, such as not having the appropriate equipment and the corresponding space to create courts at their school. Thus, the opinion of the physical education teachers is that adding tennis to the school program will give students the opportunity to know and discover the sport of tennis for all ages and in all classes of primary and secondary education.

The conditions, of course, for any effort to start a tennis program in schools must be well-planned and organized.

Education Teachers				
	N	Mean	Std. Dev.	
Strongly disagree	6	4.67	3.01	
Disagree	6	1.33	2.06	
Neither agree nor disagree	6	40.67	18.32	
Agree	6	211.33	19.67	
Strongly agree	6	138.00	17.66	

TABLE IV: DESCRIPTIVE STATISTICS FOR THE ANSWERS 7–12 OF THE PHYSICAL

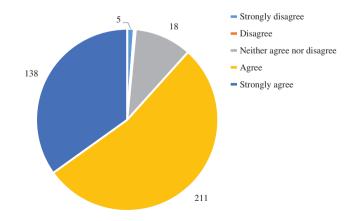


Fig. 3. The answers 7–12 of the physical education teachers ($F_{194, 87} = 0.001 \text{ P} < 0.05$).



Fig. 4. A. Benefits of the program for teachers.



Fig. 5. B. Benefits of the program for schools.



Fig. 6. C. Benefits for students.

4. Conclusions

4.1. Benefits of the Program for Teachers

- 1. It supports the development of physical education through basic skills related to the sport of tennis (see Fig. 4).
- 2. It provides a developmental approach to teaching tennis skills related to the foundations of the development of all students of all ages, of all abilities, as well as those with special needs.
- 3. It allows flexibility to engage large and mixed groups of students.
- 4. Instructors do not need to have special knowledge, and it is easy to teach the basics at an early
- 5. The enthusiasm of the students for their participation in tennis helps the teachers to be more active in their lessons.
- 6. It supports safe learning environments and implements effective teaching and learning.

4.2. Benefits of the Program for Schools

1. The program can be implemented in all areas of the school, internal and external (see Fig. 5).

- 2. It works with appropriate learning activities for all students using a workbook that is easier or harder, depending on their level.
- 3. It offers schools another dynamic, which comes from introducing tennis and engaging students
- 4. It offers an important tool for achieving learning objectives.
- 5. It creates conditions in order to increase the participation of students in tennis beyond the school
- 6. Tennis Sports Education has a particular emphasis on role responsibility, team affiliation, and fair play.

4.3. Benefits of the Program for Students

- 1. It allows students to develop socially (play, socialize, and collaborate; see Fig. 6).
- 2. It allows them to improve their physical skills and abilities (balance, observation, coordination).
- 3. It allows exercise for their whole life, with common characteristics between tennis and life.
- 4. It is easy and fun for students and offers competition and cooperation.
- 5. It supports both genders, allowing boys and girls to play together.
- 6. Grows in students' intellectual and emotional skills, such as the development of self-confidence through play and fun, the development of imagination and creativity, and also the development of concentration and attention.
- 7. It supports the importance of health and physical education to provide more opportunities for children to get active and participate.

Tennis is an enjoyable sport that improves hand-eye coordination and physical conditioning. It's perfect for mixed classrooms because boys and girls may play together, and it can be played by players of all ages and skill levels. Most kids initially participate in sports at school, and their early experiences frequently decide whether they stick with the sport. Thus, students must have the opportunity at school to learn about the sport of tennis and then decide if they like to play it.

Ultimately, there are several ways to teach tennis in schools. First, the physical education teacher has the right to teach the sport of tennis through the physical education curriculum so that the students can gain experiences and judge that it suits their abilities and particular inclinations. Second, the physical education teacher can make a visit in consultation with the nearest tennis club so that the students get in touch with the sport of tennis. Third, it could be planned in consultation with the school, after the end of the lessons, to have a special tennis coach who will teach the students who wish to be taught the sport of tennis in the area of the school. There is no need for normal tennis courts on the school grounds. By making adjustments with small nets and lines, you create a field everywhere. So, physical education teachers answer that tennis should be included in the school curriculum and taught in schools. Tennis should be accessible to as many people as possible because the benefits are significant in all areas.

CONFLICT OF INTEREST

The authors declare that they do not have any conflict of interest.

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