

## THE EFFECT OF COOPERATIVE TEACHING METHOD USED IN PHYSICAL EDUCATION AND SPORTS LESSONS ON INDIVIDUAL RESPONSIBILITY AND LEADERSHIP<sup>1</sup>

*O EFEITO DO MÉTODO DE ENSINO COOPERATIVO UTILIZADO NAS AULAS DE EDUCAÇÃO FÍSICA E ESPORTIVA NA RESPONSABILIDADE E LIDERANÇA INDIVIDUAL*

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### **Tarık Eruzun**

Physical Education Teacher, Ege University, Bornova, İzmir, Türkiye.  
[omerfaruktopaloglu@hotmail.com](mailto:omerfaruktopaloglu@hotmail.com)

### **İbrahim Dalbudak**

Assistant Professor, Uşak University, Faculty of Sport Sciences, Uşak, Türkiye.  
[dalbudakibo@hotmail.com](mailto:dalbudakibo@hotmail.com)

### **Sinem Yürük**

Assistant Professor, Physical Education and Sports Teaching Department, Faculty of Sport Sciences, Ege University, İzmir, Türkiye.  
[sinem.yuruk@ege.edu.tr](mailto:sinem.yuruk@ege.edu.tr)

### **Melih Balyan**

Assistant Professor, Physical Education and Sports Teaching Department, Faculty of Sport Sciences, Ege University, İzmir, Türkiye.  
[melih.balyan@ege.edu.tr](mailto:melih.balyan@ege.edu.tr)

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### **ABSTRACT**

The aim of this study was to examine the effect of the collaborative teaching method used in physical education and sports lessons on the development of students' leadership characteristics and individual responsibility values. In the research, a quasi-experimental model with a pre-test/post-test control group was used. The sample of the study consists of a control group of 30 participants and an experimental group of 28 participants studying at Altay Vocational and Technical Anatolian High School in Izmir province. Youth Leadership Characteristics Scale and Individual Responsibility Scale were applied to the participants as pre-test and post-test, respectively. Physical education and sports lessons for 8 weeks were taught by collaborative teaching method in the experimental group and according to the normal curriculum in the control group. Data were analyzed with the SPSS software. As a result of the analyzes, it was found that the score of all participants from the individual responsibility scale increased, but this increase did not make a significant difference between the groups.

**Keywords:** Physical Education, Teaching Methods, Cooperatio, Responsibility, Leadership.

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## RESUMO

O objetivo deste estudo foi examinar o efeito do método de ensino colaborativo utilizado nas aulas de educação física e esportes no desenvolvimento das características de liderança e dos valores de responsabilidade individual dos alunos. Na pesquisa foi utilizado um modelo quase experimental com grupo controle pré-teste/pós-teste. A amostra do estudo consiste em um grupo de controle de 30 participantes e um grupo experimental de 28 participantes que estudam na Escola Secundária Profissional e Técnica Anatolia Altay, na província de Izmir. A Escala de Características de Liderança Juvenil e a Escala de Responsabilidade Individual foram aplicadas aos participantes como pré-teste e pós-teste, respectivamente. Aulas de educação física e esportes durante 8 semanas foram ministradas pelo método de ensino colaborativo no grupo experimental e de acordo com o currículo normal no grupo controle. Os dados foram analisados com o software SPSS. Como resultado das análises, constatou-se que a pontuação de todos os participantes da escala de responsabilidade individual aumentou, mas esse aumento não fez diferença significativa entre os grupos.

**Palavras-chave:** Educação Física, Métodos de ensino, Cooperação, Responsabilidade, Liderança.

## **Introduction**

Education has a very significant place in our lives. It is at the beginning of the basic elements for the shaping of life and the development of people. Education is defined as "a dynamic process that aims individual to adapt to the environment by developing individual's personality as a whole by using the most appropriate tools, programs and methods in line with certain goals" (DÖNMEZER (be written in capital letters), 2004). Education is divided into many different branches and subjects within itself. One of the concepts that most affect the movement and health of people is Physical Education. Physical Education shapes the movements that naturally exist in human life from an early age and gives qualities such as intelligence, mental and physical strength, social suitability, discipline and courage (BALCIOĞLU, 2003). It can be said that physical education is an important educational activity because it increases the characteristic, psychology and physical health of the individual and strengthens his\her sociality (İNAL, 2009). Physical Education is a very important part of education. The main objectives of Physical Education are to help the individual to adapt to a healthy lifestyle and society in a healthy way. The realization of these goals in physical education lessons is achieved through physical activity and practices. (CAREL ET AL. 2011).

As in every educational environment, physical education and sports lessons consist of inputs, processes and outputs (SÖNMEZ, 2014). In this process, it is very important that physical education and sports courses, which are the only courses that children can move in schools, have an open education system. Each class creates separate inputs for each individual. Since students have needs and different areas of development that need to be developed, it is very important for teachers to apply different teaching methods in their lessons. (MOSSTON & ASWORTH, 2001). The method is important in terms of determining the shortest and most economical path that will lead us to our goals. While determining the teaching methods in my physical education and sports lessons, many factors such as the presence of the classroom, the level of readiness of the students, the teacher's knowledge of the methods, materials and classroom environment are effective (DEMİRHAN, 2006).

In today's understanding of education, the social development of individuals is also an important value. Accordingly, the cooperative learning method, which is one of the approaches used in the field of physical education and sports, achieves the goal of individuals' participation in society as a social asset at a high level. Slavin (1988) explained collaborative learning as teaching methods in which students generally work with small groups and group competence is rewarded in different ways. Cooperative learning also supports the social development of the individual and increases the individual's sense of responsibility and the pleasure of contributing to the group (BÜYÜKKARAGÖZ AND ÇİVİ, 1997).

Leadership is a concept that has been discussed for many years and its definition constantly differs. In general, leaders are people who are taken as an example by others, whose behaviors are appreciated by others and put people into effort in line with the goals they show. Leadership includes the characteristics of being conscious of psychological, physical and social life and making the best use of these consciousnesses (KONTER, 1996). The main purpose of leadership is to give individuals the ability to express themselves and gain a sense of self-confidence, to increase their ability to adapt to different situations, and to gain the ability to question. Lee et al. (2005) stated that children with high social skills, high verbal and dramatic skills, creativity and imagination have potential in leadership skills.

"Responsibility is an indication of the willingness of each individual to contribute to the common goals of the group of which he/she is a member and to lead" (CILENTE, 2009). A responsible person is an active participant who is willing to work, works towards his/her goals in the group and makes maximum effort (Tyree, 1998). (YONTAR AND YURTAL, 2009). Children who gain a sense of responsibility reach a sense of self-confidence more quickly. In order to raise children's awareness of personal responsibility with Physical Education and Sports course, we should use teaching methods that we can provide the most benefit for students. There are many domestic and international studies on teachers' preferred teaching methods and their effects on students in physical education and sports lessons (ÜNLÜ AND AYDOS, 2007; ŞİRİNKAN AND ERCİŞ, 2009; DÖNMEZ, 2018; WILSON, 1998; CAI SX., 1996; MOORE RE., 1997; CHANG CH. AND CHEN CS., 2005).

In our study, it is aimed to examine the effects of physical education and sports lessons taught using cooperative teaching methods on students' leadership and individual responsibility levels. For this reason, it will make an important contribution to the literature by determining at what level the teaching methods used in physical education and sports lessons contribute to development areas.

### **Research Problem**

Physical Education and Sports courses are the only courses in which students can act within certain rules at school. Children's opportunities to move are decreasing due to the decrease in playgrounds, the increase in the burden of parents in business life, and the difficulty of exam barriers in the education system of students. At this point, it becomes very important that physical education and sports lessons (different levels of lesson hours vary), which are one day a week and two hours a week, can be taught in a way that achieves the goals of the course. When we review the literature, there are many studies revealed by the current situation (DÖNMEZ, 2018; YONCALIK, 2009; YILDIZ AND KANGALGİL, 2014; AĞGEZ, 2015; İNCE AND HÜNÜK, 2010; SERBES AND CENGİZ, 2015). However, it can be said that many of these studies are studies aimed at determining the situation where there is no experimental study. Due to the decrease in the current course hours, the ways in

which the courses can provide more effective and different gains in the teaching processes are gaining importance. Physical education and sports lesson, which can provide many gains, should be planned very well in terms of both time and functioning. Determining the features of the lessons to be taught with different teaching methods will shed light on physical education and sports teachers in terms of planning and will provide an opportunity for new studies and different experiences in the long term.

#### *Research Question*

Does the method based on collaborative teaching, one of the teaching methods used in Physical Education and Sports Education courses, affect students' individual responsibility and leadership characteristics?

#### *Hypotheses of the Research*

- The cooperative teaching method used in Physical Education and Sports lessons improves the individual's sense of responsibility.
- The cooperative teaching method used in Physical Education and Sports lessons improves the leadership characteristics of the individual.

#### *Assumptions of the Research*

The students who participated in the research gave answers to the tests reflecting their knowledge. The sample represents the population.

#### *Limitations of the Research*

This research is limited to the 2020-2021 academic year. This research is limited to 60 students studying at Altay Vocational and Technical Anatolian High School in Izmir.

### *Purpose of the Research*

The main purpose of this research is to examine the effect of the cooperative teaching method used in physical education and sports lessons on students' individual responsibility and leadership levels.

### **Methodology**

#### ***Research Model***

In this study, the pretest-posttest quasi-experimental model, which is one of the quantitative research methods, was used.

#### ***The Population and Sample of the Research***

##### *Study Group*

The study group of the research consists of 58 high school students in Bornova District of İzmir province in the 2021-2022 academic year. 56.9% of the children in the study group were female (n=33) and 43.1% were male (n=25). 31% of the participants were 15 years old (n=18), 60.3% were 16 years old (n=35), and 17% were 17 years old (n=5). The study group was divided into two as control and experimental, and anew measurements were taken after eight weeks of training. 51.7% of the participants were in the control group (n=30) and 48.3% (n=28) were in the experimental group. While 86.2% (n=50) of the participants had no health problems, 13.8% (n=8) had health problems (Table 1).

Table 1 - Descriptive Statistics of the Sample Group

Descriptive Properties	%	Number of Persons
Female	56.9	33
Male	43.1	25
15 years old	31.5	18
16 years old	60.3	35
17 years old	17	5
Control group	51.7	30
Experimental group	48.3	28

Source: Authors results.

### ***Data Collection Method and Process***

The data collection was applied to the students who would voluntarily participate in the research in schools. In the study, the data collection technique was determined as a questionnaire. In the pre-test application; Youth Leadership Characteristics Scale and Individual Responsibility Scale were applied. After this application, the participants in the experimental group were regularly taught two days a week for eight weeks by the physical education and sports teacher, and the lessons were taught to the control group according to the curriculum in normal flow. At the end of this period, the leadership and responsibility levels of the participants were tested by applying the Youth Leadership Characteristics Scale and the Individual Responsibility Scale again as the final test.

### ***Tools Used in Data Collection***

The tools used in data collection consist of 3 parts. First, the participants filled out the personal information form. Then, questionnaires with Youth Leadership Characteristics Scale and Individual Responsibility Scale were used, respectively.

### *Personal Information Form*

The participants filled in the form containing the demographic information (gender, age, class, whether there are any health problems) of the students studying in high school.

### *Individual Responsibility Scale*

The Student Individual Responsibility Scale, which was developed by Singg and Ader (2001) and adapted to Turkish by Doğan (2015) and consists of 10 items, is a one-dimensional measurement tool according to the validity and reliability analysis performed by the researchers. The scale is scored in a four-point Likert type. In the study conducted for the reliability study, the Cronbach Alpha internal consistency coefficient was found to be .63.

### *Youth Leadership Characteristics Scale (YLCS)*

The Youth Leadership Characteristics Scale developed by Cansoy and Turan (2016) consists of 40 items with 7 factors. The items created in the scale are scored in a five-point Likert type (1=never - 5=always). While the Cronbach's Alpha values calculated for the reliability of the factors of the Youth Leadership Characteristics Scale took values between .70 and .80, the Cronbach's Alpha value of the whole scale was found to be .92. This scale measures the level of leadership characteristics in young people. In the analysis, first of all, the Eigen value was determined as 1. The analyzes were started with 105 items and as a result, a type consisting of 40 items and 7 factors was determined. The explained total variance amount of the 7 factors is 51.06%. The variance amounts explained by the factors were determined as 24.70% for the first factor (F1), 6.43% for the second factor (F2), 5.95% for the third factor (F3), 4.49% for the fourth factor (F4), 3.70% for the fifth factor (F5), 2.98% for the sixth factor (F6), and 2.83% for the seventh factor (F7), respectively. After these processes, Varimax Vertical Rotation Analyses were performed to determine the distribution of the items to the factors and the results are presented in Table 1. As seen in Table 1, Factor (F1) consists of 7 items, Factor (F2) consists of 7 items, Factor (F3) consists of 7 items, Factor (F4) consists of 6 items, Factor (F5) consists



of 4 items, factor 6 consists of 4 items, and factor 7 (F7) consists of 5 items. Seven factors were found by examining the items distributed to each factor. When the distribution of the items to the factors was examined using the Varimax Vertical Rotation Technique, it was seen that the eigen value of the scale was collected in 7 factors greater than 1, and all items had acceptable load values in the factor they entered (the lowest item load value was 0.43; the highest item load value was 0.72). The names of these factors are as follows: F1 Willingness to struggle and goal setting, F2 ability to communicate, F3 group skills, F4 trust and reliability, F5 decision-making skills, F6 problem solving skills and F7 sense of responsibility.

#### *Limitations of the Research*

This research is limited to 2021- 2022. This research is limited to 60 volunteer students studying in high school in Izmir.

#### *Data Analysis and Evaluation Techniques*

According to demographic variables, multiculturalism and awareness, skill and knowledge sub-dimensions were analyzed separately. First of all, it was decided whether the three different sub-dimensions showed normal distribution by examining the coefficients of variation, skewness and kurtosis values, histogram and Q-Q graphs, and normality test values. In the normal distribution results (Kolmogorov-Smirnov), it was observed that the data were normally distributed ( $p > 0.05$ ). For this reason, parametric tests were used for the statistics of the data. Variance (ANOVA) analysis was used for two groups and pre-post-repetitive measurements. Independent sample t-test analysis was used to observe the difference between the groups. In the analysis of the data, the significance value was accepted as " $p < 0.05$ ".

## Results

It was found that 58 students participating in the study of had a total score of 23.98 before the training and 23.81 after the implementation from the responsibility questionnaire. In the willingness to struggle and goal setting sub-dimension, which are one of the sub-dimensions of the leadership scale, 26.25 and 27.60 points were obtained respectively before and after the implementation. In the sub-dimension of being able to communicate, it is 24.56 and 24.56 points, respectively. In the group skills sub-dimension, 27.53 and 28.50 points were obtained. In the sub-dimension of trust and reliability, 24.58 and 25.62 points were obtained. In the decision-making sub-dimension, 15.89 and 16.55 points were obtained. For problem solving, 16.03 and 16.81 points were obtained before and after the test, respectively.

In the responsibility sub-dimension, 17.79 and 18.77 points were obtained, respectively. According to the ANOVA result obtained from the responsibility scale, it was found  $F_{(1-56)}=3,317$ ,  $p=0,074$ ,  $\eta_p^2 = 0,056$ . According to this result, the differences of the groups did not show a significant interaction in the responsibility scale. The responsibility scale was not affected by this class separation. According to the results of the ANOVA analysis, no significant difference was found between the groups as a result of the pairwise comparisons ( $p>0.05$ ).

Table 2 - Pre-Application and Post-Application Differences According to the Responsibility Scale

	Classification	n	Before-After X	Before- After SS	F	p
Responsibility Scale	Control	30	2.41-2.44	0,0.35-0.36	3.317	<0.001
	Experimental	8	.38-2.31	.43-0.21		

Source: Authors results.

The results obtained from the leadership scale and its sub-dimensions are given in Table 3.

Table 3 - Pre-application and Post-application Differences of Students According to the Leadership Scale

	Sub-dimension	Classification	n	Before-After $\bar{X}$	Before-After SS	F	p
	Struggle and Goal Setting	Control	30	3.59-3.62	0.70-0.71	26.485	<0.001
		Experimental	28	3.92-3.94	0.83-0.64		
	Being able to communicate	Control	30	3.47-3.48	0.93-0.84	35.245	<0.001
		Experimental	28	3.55-4.07	1.03-0.70		
Youth Leadership Characteristics Scale	Group Skills	Control	30	3.82-3.73	0.76-0.72	38.168	<0.001
		Experimental	28	4.04-4.07	0.86-0.67		
	Trust and Reliability	Control	30	3.98-4.10	0.65-1.12	0.426	0.008
		Experimental	28	4.21-4.44	0.79-0.60		
	Decision Making	Control	30	3.80-3.84	0.77-0.69	10.508	0,02
		Experimental	28	4.15-4.45	0.71-0.54		
	Problem Solving	Control	30	4.00-4.01	0.75-0.72	16.284	<0.001
		Experimental	28	4.00-4.40	0.87-0.65		
	Responsibility	Control	30	3.42-3.38	0.91-0.88	36.317	<0.001
		Experimental	28	3,70-3,75	0.91-0.68		

n: Number of Participant,  $\bar{X}$ : Mean, SD: Standard Deviation  
Source: Authors results.

According to Table 1, significant interactions were found between different groups and measurements. In this case, it can be said that the fact that the groups are different makes a difference in the leadership sub-dimensions. According to the ANOVA test group difference result, a significant difference was found between the groups by finding a difference of 0.497 and  $p=0.01$  for the struggle and goal setting sub-dimension, and this difference is due to the difference between the groups in the post-test ( $p<0.001$ ). No significant difference was found between the groups by finding  $p=0.157$  with a difference of 0.283 for the trust and reliability sub-dimension. For the decision-making sub-dimension, a significant difference was found between the groups with a difference of 0.479 and  $p=0.009$ . This difference is due to the difference between the groups seen in the post-test ( $p<0.001$ ). For the problem solving sub-dimension, no significant difference was found between the groups with a difference of 0.193 and  $p=0.304$ . For the responsibility sub-

dimension, a significant difference was found between the groups with a difference of 0.532 and  $p=0.019$ . This difference is due to the difference between the groups seen in the post-test ( $p<0.001$ ).

## Discussion

In this study, the effect of the cooperative teaching method used in physical education and sports lessons on students' individual responsibility and leadership levels was examined with a quasi-experimental model. When the pre-test and post-test results of the participants related to the leadership scale were examined, a significant difference was found between the groups in the sub-dimensions of Group skills, Decision Making, Responsibility, Struggle and Goal Setting. No significant difference was found between the groups in the sub-dimensions of Communicating, Trust and Reliability, and Problem Solving. In addition, it was determined that there was an increase in the sub-dimensions of the Young Leadership Characteristics Scale compared to the first test average of the experimental group. As a result of the research conducted by Cansoy (2017) on university students, it was observed that all levels of students' desire for struggle and goal setting, communication skills, group skills, problem solving skills, decision-making skills, awareness of responsibility, trust and reliability, leadership awareness and emotional awareness increased significantly thanks to their participation in the leadership skills training program. In Cansoy's (2015) study with secondary school students, it was found that students had the highest level of trust and reliability, and the lowest level of communication skills. Limited studies in the literature are similar to the findings of this study. When the literature is examined, it is observed that the number of studies on this subject is quite small, and the researches are generally survey studies. In this respect, separate comparisons were made for the sub-dimensions of the scale in the discussion section.

In the struggle and goal setting sub-dimension, an increase was observed in the experimental group and the control group. A significant difference was found between the two groups for this sub-dimension. In a similar study conducted by

Erpalabıyık (2018) on university students, the relationship between youth leadership characteristics and self-confidence levels was examined, and it was determined that there were positive and moderate relationships. It was determined that there was a positive and moderate relationship between the sub-dimension of "Willingness to struggle and goal setting", which is one of the sub-dimensions of youth leadership characteristics, and general self-confidence, internal and external self-confidence. In our study, students of cooperative learning included in the process try to achieve success in line with common goals and to learn by acting together in order to achieve the determined goals. These gains provided by the cooperative learning method may have led to an increase in the average scores of the Willingness to Struggle and Goal Setting sub-dimension.

In the sub-dimension of being able to communicate, differences were observed between the pre-tests and post-tests in the control group and the experimental group. However, according to the result of the group difference, no significant difference was found between the groups for the communication sub-dimension. Penelope (1993); Anderson and Wintealt (1995); Grineski and the Janissary (1999); Smith et al. (1997); Polvi and Telama (2000); Dyson (2001) and Dyson (2002) stated that cooperative learning in preschool, primary and secondary education improves interpersonal skills, improves positive physical communication, reduces negative verbal communication, improves listening ability and, as a result, is a strong format for developing social skills in physical education lessons. Likewise, as a result of the research of Quarstein and Peterson (2001), it was concluded that the cooperative learning method positively affects communication skills. It is seen that the studies in the literature support our results in the communication sub-dimension. One of the most important elements of cooperative learning is the communication skill established between students. Cooperative learning improves students' verbal communication skills, asking questions, answering, and helping them learn each other's thoughts on the subject. This verbal interaction between students contributes to the development of communication skills. Therefore, these gains provided by cooperative learning may have increased the average of the communication sub-dimension. In addition, since

students are in verbal, physical, etc. communication with each other during the education process without using a specific method such as cooperative learning method in physical education and sports lessons, it is likely that there will be an increase in these skills. For this reason, the increase in communication skills in the control group taking physical education lessons without using the model is an expected result.

While the mean scores of the control group decreased in the Group Skills sub-dimension, it was observed that the mean scores of the experimental group increased. A significant difference was found between the groups for the group skills sub-dimension. In support of this result, it is suggested that the interaction between students makes the most serious contribution to the success of cooperative learning groups (Şimşek, 1994). In addition, in Özer Topaloğlu's (2022) study on youth leadership characteristics of university students, it was concluded that group skills were important. The studies in the literature on group skills, one of the youth leadership characteristics, are in parallel with the results of this study. Cooperative learning teaches students to learn through groups and to act as a group by teaching them to work in groups. Being able to act as a group in cooperative learning and being responsible for each other's learning contributes to students' group skills. In these respects, the cooperative teaching method may have led to an increase in the average in the group skills sub-dimension.

In the sub-dimension of trust and reliability, an increase was observed in the averages of the two groups. No significant difference was found between the groups for the trust sub-dimension. It is also supported by studies in the literature that cooperative learning may have positive effects on the sub-dimension of trust and reliability. In the studies conducted by Dyson and Michelle (1997), Sarıtaş (1998) and Dyson (2002) on physical education lessons, it was stated that cooperative learning improved cognitive processes such as self-confidence, motivation and problem solving. In cooperative learning, students' faith and trust in themselves and their teammates increases thanks to the contribution they have made to the team. In the cooperative teaching method, students evaluate each other. Trust between students is very important for these evaluations to be accurate and objective. The

cooperative teaching method directly contributes to the students' sense of trust, and this contribution may have led to an increase in the average of the trust sub-dimension.

In the decision-making sub-dimension, an increase was observed in the mean scores of the two groups. A significant difference was found between the groups for the decision-making sub-dimension. Burnett (1991) stated in his study that low feelings of self-confidence in the decision-making process cause difficulties in the decision-making of the individual, while a high level of self-esteem enables the individual to make more rational and logical decisions. Since the development in the sense of self-confidence can be observed in individuals thanks to physical education lessons, it is thought that there are positive developments in both groups in the decision-making dimension in our study. Decision making is one of the most fundamental elements of cooperative learning. It is an expected result that there will be an increase in the decision-making levels of the students who evaluate both themselves and their peers in the cooperative teaching method. Students who evaluate their peers in the evaluation process in cooperative teaching evaluate each other's practices and make a decision according to their own observation. These experiences of the students who made observations and evaluations in this teaching method may have caused the observed increase in the averages of the decision-making sub-dimension.

In the problem solving sub-dimension, a very small increase was observed in the control group (4.00-4.01), while a higher increase (4.00-4.40) was observed in the experimental group. No significant difference was found between the groups for the problem solving sub-dimension. In the literature, the positive effects of the cooperative learning method on the problem solving sub-dimension are similar to the findings of this study. In Gök's (2006) study of the cooperative learning model applied to high school students in physics education, it was stated that it was effective on students' attitudes towards problem solving. In the study of Kiremitçi and Doğan (2010) in which the cooperative learning method was used in dance education in physical education lessons, it was determined that there was an increase in the development of students' problem-solving skills compared to the

students who received dance education with traditional methods and this difference was significant. Cooperative learning prepares an environment for students to produce solutions to the problem by acting together on a specific subject and for students to contribute individually to the solution of the problem. This contribution of the cooperative teaching method on students may have affected the increase in the average of the Problem Solving sub-dimension.

It was observed that the mean scores of the control group decreased and the mean scores of the experimental group increased for the responsibility sub-dimension. A significant difference was found between the groups for the responsibility sub-dimension. Slavin (1996) evaluated 52 studies on cooperative learning lasting at least four weeks in grades 6-12, which coincided with adolescence. In these studies, the effects of cooperative learning on student achievement were measured. In 63% of these studies, student achievement in the cooperative learning groups was higher than the control group, no difference was found in 31%, and in only three studies, student achievement in the control group was found to be significantly higher than the experimental group. It was stated that group goals and individual responsibility should be found in order for cooperative learning to be effective. Cooperative learning contributes directly to students' level of responsibility. In the teachings made with this method, group members share their experiences and feel a sense of responsibility towards each other. In the cooperative teaching method, the roles in which the students will be responsible for each other's learning and at the same time evaluate each other's practices are given to the student. This role transferred to the student helps the student develop a sense of responsibility. This contribution of cooperative learning on students may have increased the average of the responsibility sub-dimension.

As another main finding in the study; according to the results of the Individual Responsibility Scale, the differences of the groups did not show a significant interaction. The responsibility scale was not affected by this class separation. According to the results of the ANOVA analysis, no significant difference was found between the groups as a result of the pairwise comparisons. In the studies conducted by Öztürk and Güven (2020) in which they carried out a meta-analysis of



the studies on responsibility education, it was stated that there were few applied studies on the value of responsibility and the applications made in these studies increased the responsibility levels of the students. When the literature is reviewed, it has been observed that the studies conducted are mostly questionnaire studies for due diligence and the number of applied studies for the field of Physical Education is low. Apık (2018) concluded that there was a significant difference between the pre-test and post-test scores of the students in terms of fairness and responsibility value levels in his study on the relationship between gaining fairness and responsibility values to primary school 4th grade students and that the practices increased the responsibility value levels of the students. In the control group, it was concluded that there was no significant difference in the pre-test and post-test comparisons of the students. Considering different studies on the development of the concept of responsibility, it was stated that the responsibility levels of the students increased thanks to the human values development program applied by Dilmaç (2007) to high school students. In addition, there are studies in the literature showing that responsibility training for different student levels is also effective (AYDIN, 2008; KATILMIŞ ET AL. 2011; KROP, 2006; PERRY AND WILKENFELD, 2006). Although no significant difference was found in our study according to the individual responsibility scale, a significant difference was found in the Youth Leadership Scale according to the responsibility sub-dimension. Therefore, in order to obtain a clearer finding about individual responsibility, examining the long-term effects of teaching methods, techniques and models by supporting them with quantitative and qualitative studies in different samples will contribute to the literature.

## Conclusion

As a result of our research, it was concluded that the cooperative teaching method used in physical education and sports lessons positively affects students' leadership characteristics.

1. Necessary arrangements should be made for teachers to use collaborative teaching methods more in physical education sports lessons.
2. In order to examine the effects of different teaching methods on students, more practical studies should be carried out.
3. In physical education and sports lessons, the cooperative method should be applied more in order to ensure the development of students' leadership characteristics (trust, communication, etc.).
4. In order to ensure students' development in the cognitive field (problem solving) in physical education and sports lessons, the cooperative teaching method should be used more.
5. Investigation of the effects of similar studies on different psychological characteristics may contribute to the literature.
6. Carrying out similar studies on athletes in different sports types may contribute to the literature.

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