Is The Effect of Cooperative Learning on Social, Emotional and Moral Development?

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Abstract

It has been seen that the effect of cooperative learning is not handled with a holistic perspective in spaces such as honesty, self-development, self-control and prosocial behavior, and due to this deficiency in the literature, it is aimed to examine the effect of cooperative learning on social, emotional and moral development. A total of 48 students, 24 male and 24 female, studying in the 7th grade of secondary school participated in the study. In the study, pretest-posttest experimental design with control group is used. Students are divided into experimental and control groups. While the jigsaw technique, one of the techniques of the 8-week cooperative learning model, is applied to the experimental group, the direct instruction model is applied to the control group. "Social-Emotional and Moral Development Scale", which is developed by Ji et al. and adapted into Turkish by Bozgün and Baytemir, is applied to both groups before the training started and 8 weeks after the training. "Independent t test" and "paired sample t test" are used in the study. In the study, it is observed that there is no meaningful difference between the dimensions in the experimental and control groups at the beginning of the experiment. However, as a result of the training; according to the group to which the cooperative learning model is used, the group to which the direct instruction model is applied, it is determined that the scores of prosocial behavior, honesty, self-development, self-control, respect at school and respect at home showed a statistically significant difference.

Keywords: Cooperative Learning, Social Development, Emotional Development, Moral Development

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İşbirlikli Öğrenmenin Sosyal, Duygusal ve Ahlaki Gelişim Üzerindeki Etkisi

Öz

İşbirlikli öğrenmenin etkisinin dürüstlük, kendini geliştirme, özdenetim ve toplum yanlısı davranış gibi alanlarda bütüncül bir bakış açısıyla ele alınmadığı görülmüş ve literatürdeki bu eksiklikten dolayı işbirlikli öğrenmenin etkisinin incelenmesi amaçlanmıştır. Araştırmaya ortaokul 7. sınıfta öğrenim gören 24'ü erkek, 24'ü kız toplam 48 öğrenci katılmıştır. Araştırmada kontrol gruplu ön test son test deneysel desen kullanılmıştır. Öğrenciler deney ve kontrol gruplarına ayrılmıştır. Deney grubuna 8 haftalık işbirlikli öğrenme modelinin tekniklerinden biri olan yapboz tekniği uygulanırken, kontrol grubuna doğrudan öğretim modeli uygulanmıştır. Ji ve diğerleri tarafından geliştirilen "Sosyal-Duygusal ve Ahlaki Gelişim Ölçeği". Bozgün ve Baytemir tarafından Türkçe'ye uyarlanan, eğitim başlamadan önce ve eğitimden 8 hafta sonra her iki gruba da uygulanmıştır. Çalışmada "bağımsız t testi" ve "eşli örneklem t testi" kullanılmıştır. Araştırmada deney ve kontrol gruplarındaki boyutlar arasında deney başlangıcında anlamlı bir fark olmadığı gözlenmiştir. Ancak eğitim sonucunda; işbirlikli öğrenme modelinin kullanıldığı gruba, doğrudan öğretim modelinin uygulandığı gruba göre olumlu sosyal davranış, dürüstlük, kendini geliştirme, öz kontrol ve okulda saygı puanlarının olduğu belirlenmiştir.

Anahtar Kelimeler: İşbirlikli Öğrenme, Sosyal Gelişim, Duygusal Gelişim, Ahlaki Gelişim

Introduction

It is seen that different pedagogical approaches have emerged, especially after the 1970s, in order to make the learning-teaching process more successful in physical education and sports education. Within the framework of this understanding; teaching models (Joyce and Weil, 1972), curriculum models (Jewet and Bain, 1985) and pedagogical models (Kirk, 2013) are used to make education more qualified. In these models, which have been used from the past to the present, the focus has shifted from the teacher to the student (Casey, 2016) and the cooperative teaching model has come to the fore as an understanding that gives more importance to the communication and interaction of the student (Ward and Lee, 2005).

The cooperative learning model has been developed after the 1970s, since schools do not provide much opportunity for students to develop their interpersonal skills due to competitive and individual learning environments (Johnson and Johnson, 2009). The model, which emerged as a combination of academic and social learning, aims to develop individuals' interpersonal skills and interact with other individuals in the changing world (Kagan and Kagan, 2009). The model is defined as a teaching model in which students have to work together in small and structured groups to fill out a task (Dyson et al., 2010). The most important elements of this model are positive interdependence, individual responsibility, face-to-face interaction, interpersonal and small group skills, and group processing. It is seen that studies on the effects of the model have gained momentum especially in the last 20 years (Metzler, 2011). When the studies are examined, it has been found to be done that the studies on the effects of cooperative learning on social skills (Dyson and Strachan, 2004; Polvi and Telama, 2000), academic skills (Koprowski and Perigo, 2000), motor performance and strategic choices (Dyson et al., 2010). Johnson and Johnson (2009) stated in their study that cooperative learning improves students' motor performance and provides gains. Conway and Gow (1988) stated that instructional strategies that include group work such as cooperative learning improve students' social skills and form a framework for education. Arslan and Zengin (2016) state that cooperative learning provides academically meaningful learning, gives a different perspective to events, eliminates misconceptions, provides information exchange and reduces workload. He also states that skills such as increasing the sense of social responsibility, learning to share, enabling to work together, increasing self-confidence, ensuring socialization and being active are developed by cooperative learning. In the cooperative learning model studies on the development of social skills; it has been observed that studies are concentrated in areas such as communication, prosocial commitment

(Deutsch, 2006; Johnson and Johnson, 2009), improvement in personal and motivational climate, being more understanding and respecting the opposite sex (Sánchez-Hernandez et al., 2018), however, no studies are found in spaces such as honesty, self-development, self-control and prosocial behavior.

Due to this deficiency in the literature, the study is handled in line with this purpose, wondering how the cooperative teaching model would contribute to the social, emotional and moral development of students. Dyson et al. (2020) stated that this deficiency should be eliminated by conducting more empirical studies on the achievement of students' social-emotional learning outcomes. As a matter of fact, Casey (2014) emphasizes that in order for cooperative learning to be more acceptable in both current and future pedagogical practices, the usefulness of cooperative learning should go beyond intuition, and for this, it is necessary to illuminate the subject from different perspectives. In order to further elucidate the effect of the cooperative teaching model, answers to the following sub-problems are sought:

1. Is there a meaningful difference between the cooperative teaching model and the direct teaching model and the prosocial behavior dimension of the students who learn?
2. Is there a meaningful difference between the honesty dimension of the students who study with CTM and DTM?
3. Is there a meaningful difference between the dimensions of self-development of the students who study with CTM and DTM?
4. Is there a meaningful difference between the self-control dimensions of the students who study with CTM and DTM?
5. Is there a meaningful difference between the dimensions of respect at school for the students who study with CTM and DTM?
6. Is there a meaningful difference between the dimensions of respect at home for the students who study with CTM and DTM?

Method

In this study, pretest-posttest experimental design with control group is used.

Research Group

The research is carried out in the 7th grade of a secondary school in the central division of Balıkesir section in the first term of the 2021-2022 academic year. In this study, the content included in the curriculum is presented to the students and the experimental and

control group students are trained according to different teaching methods. The fact that the teacher who carried out the application in the study is teaching the 7th grades at the time of the study and that the maximum participation in physical education classes in the school where the study is conducted is in the 7th grades, causing the study to be designed on the 7th grades. In the research, in determining the experimental and control groups, two 7th grade students studying at the school are determined as the experimental group and the other as the control group with the neutral assignment method. While the lessons are taught using the cooperative teaching model in the experimental group, the direct teaching model is used in the control group. In the study, a total of 24 students (12 girls, 12 boys) are included in the experimental group, and a total of 24 (9 girls, 15 boys) students in the control group. The mean age of the students in the experimental group is $12.21\pm.58$ and the mean age of the students in the control group is $12.42\pm.65$. At the beginning of the study, necessary permissions (Number: E-19928322-100-189442) are obtained from Balıkesir Provincial Directorate of National Education and the Ethics Committee.

Data Collection Tool

The SEMDS, developed by Ji et al. (2013), is used to determine the social-emotional and moral development of children aged 8-12 in primary school 3rd grade, 4th grade and 5th grade. The Turkish adaptation of the scale and its validity and reliability study are carried out by Bozgün and Baytemir (2019). In scale, six dimensions and a total of 28 dimensions as "prosocial behavior (6 items), honesty (5 items), self-development (4 items), self-control (4 items), respect at school (5 items) and respect at home (5 items)" item is included. The sub-dimensions of prosocial behavior, self-control and self-development in the scale together determine social-emotional development. In this study, using these three sub-dimensions of the SEMDS scale, it is aimed to examine the social-emotional development of primary school children with a 14-item scale form, and the measurement tool is named "Social-Emotional and Moral Development Scale (SEMDS)" in the following sections. The scale is answered with a 4-point Likert-type rating key, namely I strongly disagree (1), disagree (2), agree (3) and completely agree (4). The entire score that can be obtained from the 14 items in the scale varies between 14 and 56, and there is no reverse coded item. As the scores obtained from the measurement tool increase, the social-emotional development level of the student increases; as the score gets lower, the social-emotional development level of the student decreases. While the Cronbach alpha reliability coefficient is calculated as .89 in the original study of the

scale, it is determined as .78 in this study. The Cronbach alpha reliability coefficients of the sub-dimensions of the scale are given in the table below.

Table 1

Cronbach's Alpha Reliability Coefficients of SEMDS Sub-Dimensions

	Madde Sayıları	Mean	SD	Cronbach's Alpha
Prosocial Behavior Pretest	6	3,28	0,33	.55
Prosocial Behavior Posttest		3,48	0,49	.78
Honesty Pretest	5	3,28	0,41	.56
Honesty Posttest		3,31	0,46	.65
Self-development Pretest	4	3,15	0,55	.53
Self-development Posttest		3,27	0,54	.65
Self-control Pretest	4	2,66	0,50	.55
Self-control Posttest		2,79	0,70	.72
Respect at school Pretest	5	3,44	0,30	.53
Respect at school Posttest		3,51	0,43	.75
Respect at home Pretest	4	3,29	0,43	.65
Respect at home Posttest		3,33	0,45	.62

Process Time

Before starting the study, necessary permissions are obtained from the school administration where the application would be made and from the parents of all the students who would attend the physical education classes, and consent forms are signed. In the study, two 7th graders are determined by the neutral assignment method. In the first semester of the 2022-2023 academic year, the data of the scale are collected in the first physical education lesson. Then, the trainings planned to be given to the experimental group during the 8-week training period are implemented. In this process, the content in the curriculum is handled with the direct teaching model for the control group. The program is implemented for 8 weeks during the physical education lesson hours (2 hours) determined in the weekly curriculum of the school. At the end of the trainings, the data of the scale are finally collected and the experiment is terminated. In the experimental group, the subject is handled with the "Jigsaw" technique. Students work in two different groups, main groups and split-join groups. First, students come together in their original groups, taking into account heterogeneous characteristics, and each team member is given a particular duty. Then, students who get the same task in the original groups are divided into pieces like a puzzle, and students join the puzzle/split-join groups created in this way. These puzzle groups work together to study the same topic until they learn and master the material given to them. After learning the subject in

the split-join group, students return to their original group and share what they learned with their original group members (Clarke, 1994). Studies show that the jigsaw technique is more productive than traditional teaching methods in increasing student success, that students are encouraged to express their ideas, increase their self-confidence, and lead them to cooperate with each other (Aksoy, 2006; Buzludağ, 2010). While the direct teaching model is applied in the control group in the study, the procedures performed in the experimental group are described in detail below.

1. The lesson started with greetings and roll call.

2. During the introduction to the course, the knowledge or skills that will attract the attention of the students are shared, and then their previous knowledge on the subject is reviewed. Then, the importance of the subject for students is emphasized.

3. During the transition to the lesson, the students are given a short warm-up (such as straight running, educational game).

4. The subject to be covered during the lesson is explained visually and verbally by the teacher.

5. The students' questions are answered. In addition, some questions are asked to the students about whether they understood what to do in terms of both psychomotor skills and cooperation skills.

6. In the study, the "jigsaw" technique, which is included in the cooperative teaching model to the experimental group, is used.

7. The researcher observed the groups during the lesson and made corrections if there are any problems.

Data Analysis

In the study, the normality assumptions of the measurements are examined first. The compliance of the measurements with the normality assumptions is examined by Q-Q Plots and the kurtosis skewness values (Table 2). Tabachnick and Fidell (2013) emphasized that the distribution occurs as a normal distribution when the skewness and kurtosis values are between ±1.50. In the study, "Independent t test" is used to determine the score difference between the experimental and control groups in terms of the determined variables, and "paired sample t test" is used to find the difference in scores between the experimental and control groups before and after the experiment. The significance level in the study is taken as $p < .05$.

Table 2

Kurtosis Skewness Values for Dimensions

	Madde Sayıları	Skewness	Kurtosis
Prosocial Behavior Pretest	6	0,144	-0,264
Prosocial Behavior Posttest		-0,756	-0,654
Honesty Pretest	5	-0,600	0,484
Honesty Posttest		-0,592	0,642
Self-development Pretest	4	-0,534	-0,482
Self-development Posttest		-0,600	0,014
Self-control Pretest	4	-0,627	0,241
Self-control Posttest		-0,454	-0,421
Respect at school Pretest	5	0,072	-0,422
Respect at school Posttest		-0,709	0,248
Respect at home Pretest	4	-0,927	1,214
Respect at home Posttest		-0,333	-0,081

Findings

In the study, the results obtained with the scale applied to the experimental and control groups before and after the 8-week training are presented below.

Table 3

Pretest-Posttest Results of The Control Group

	Mean	N	sd	t	df	p
Prosocial Behavior Pretest	3,19	24,00	0,32	0,292	23	0,773
Prosocial Behavior Posttest	3,16	24,00	0,46			
Honesty Pretest	3,22	24,00	0,36	1,672	23	0,108
Honesty Posttest	3,11	24,00	0,40			
Self-development Pretest	3,17	24,00	0,58	2,006	23	0,057
Self-development Posttest	2,97	24,00	0,51			
Self-control Pretest	2,69	24,00	0,48	1,366	23	0,185
Self-control Posttest	2,50	24,00	0,68			
Respect at school Pretest	3,37	24,00	0,26	1,704	23	0,102
Respect at school Posttest	3,28	24,00	0,37			
Respect at home Pretest	3,19	24,00	0,47	0,848	23	0,405
Respect at home Posttest	3,10	24,00	0,38			

As a result of the analysis, it is determined that there is no meaningful difference in the sub-dimensions of the "Social and Emotional Moral Development Scale" of the control group before and after the 8-week training.

Table 4

Experimental Group Pretest-Posttest Results

	Mean	N	SD	t	df	p
Prosocial Behavior Pretest	3,38	24	0,31	-6,716	23	0,000*
Prosocial Behavior Posttest	3,79	24	0,27			
Honesty Pretest	3,34	24	0,44	-2,027	23	0,054
Honesty Posttest	3,51	24	0,44			
Self-development Pretest	3,13	24	0,53	-6,461	23	0,000*
Self-development Posttest	3,57	24	0,38			
Self-control Pretest	2,63	24	0,52	-3,287	23	0,003*
Self-control Posttest	3,08	24	0,60			
Respect at school Pretest	3,51	24	0,32	-3,576	23	0,002*
Respect at school Posttest	3,74	24	0,35			
Respect at home Pretest	3,39	24	0,36	-2,394	23	0,025*
Respect at home Posttest	3,55	24	0,41			

*p<.05

As a result of the analysis, in the experimental group, prosocial behavior (t=-6.716, p=.000), self-development (t=-6.461, p=.000), self-control (t=-3.287, p=.003), respect at school (t=-3.576, p=.002) and respect at home (t=-2.394, p=.025) dimensions are found to be statistically significant.

Table 5

Comparison of the Pretest-Posttest Results of The Control and Experimental Groups

	Groups	N	Mean	sd	t	df	p
Prosocial Behavior Pretest	Experimental Group	24	3,38	0,31	2,143	46	0,037*
	Control Group	24	3,19	0,32			
Prosocial Behavior Posttest	Experimental Group	24	3,79	0,27	5,781	46	0,000*
	Control Group	24	3,16	0,46			
Honesty Pretest	Experimental Group	24	3,34	0,44	1,069	46	0,291
	Control Group	24	3,22	0,36			
Honesty Posttest	Experimental Group	24	3,51	0,45	3,291	46	0,002*
	Control Group	24	3,11	0,40			
Self-development Pretest	Experimental Group	24	3,14	0,53	-0,194	46	0,847
	Control Group	24	3,17	0,58			
Self-development Posttest	Experimental Group	24	3,57	0,38	4,642	46	0,000*
	Control Group	24	2,97	0,51			
Self-control Pretest	Experimental Group	24	2,64	0,52	-0,358	46	0,722
	Control group	24	2,69	0,48			
Self-control Posttest	Experimental Group	24	3,08	0,60	3,158	46	0,003*
	Control Group	24	2,50	0,68			
Respect at school Pretest	Experimental Group	24	3,52	0,32	1,788	46	0,080
	Control Group	24	3,37	0,26			
Respect at school Posttest	Experimental Group	24	3,74	0,35	4,467	46	0,000*
	Control Group	24	3,28	0,37			
Respect at home Pretest	Experimental Group	24	3,40	0,36	1,715	46	0,093
	Control Group	24	3,19	0,47			

Respect at home Posttest	Experimental Group	24	3,55	0,41	3,912	46	0,000*
	Control Group	24	3,10	0,38			

*p<.05

As a result of the analysis, it is determined that there is a meaningful difference between the groups in the prosocial behavior pre-test (t=2.143, p=.037), but this difference increased even more with the post-test (t=5.781, p=.000). While no significant difference is observed in the pre-test (t=1.069, p=.291) in the honesty dimension, there is a significant difference (t=3.291, p=.002) in the post-test. While the pre-test results do not reveal a meaningful difference between the groups in self-development (t=-.194, p=.847), there is a meaningful difference in the post-test (t=4.642, p=.000). While there is no meaningful difference between the groups in the self-control pre-test results (t=-.358, p=.722), there is a statistically significant difference in the post-test results (t=3.158, p=.003). While the pre-test results do not show a meaningful difference in the dimension of respect at school (t=1.788, p=.080), the post-test results showed a statistically significant difference between the groups (t=4.467, p=.000). Finally, while the pre-test results do not reveal a statistically meaningful difference between the groups in terms of respect at home (t=1.715, p=.093), the post-test results pointed out a statistically significant difference (t=3.912, p=.000).

Discussion and Conslusion

The aim of this study is to reveal how the cooperative teaching model will contribute to the social, emotional and moral development of students. For this purpose, pretest-posttest experimental design with control group is used. In this part of the study, the limitations of the study will be expressed, the findings of the study will be interpreted and suggestions for future studies will be formed.

Interpretation of the Findings

In the study, it is determined that prosocial behavior developed with the cooperative teaching model. In the cooperative learning model, prosocial behaviors of students such as supporting each other with their friends (Şimşek, 2007), behaving more understanding (Sánchez-Hernández et al., 2018), listening, approving, helping, constructive criticism and encouragement improve students' social skill level (Arslan and Zengin, 2016). In addition, thanks to positive commitment (Deutsch, 2006; Johnson and Johnson, 2009), which is one of the important elements of cooperative learning, students help each other to learn and solidarity behavior comes to the fore. By improving verbal communication skills, the model facilitates the solution of problems and gains the ability to work together in harmony

(Christison, 1990), so this situation can also increase the frequency of exhibiting prosocial behaviors.

At the end of the cooperative training, a statistically meaningful difference is found in favor of the experimental group in the dimension of honesty. No study has been found in the literature that directly deals with the value of cooperative teaching and honesty, but it has been seen that honesty as a combination of trust is used with cooperative work. Cooperative learning in work requires the trust of members in the group. A successful cooperative learning model also provides confidence building. One of the components of this trust is honesty (Baturay and Toker, 2019). Social exchange theory states that interpersonal trust is positively related to the amount of sharing (Staples and Webster, 2008). For this reason, it is expected that trust will develop in cooperative teaching, where there is a lot of sharing. Therefore, it can be said that honesty, which is one of the elements of trust, has developed.

In this study, it is determined that the cooperative teaching model made a significant positive contribution to the self-development of the students. It has been proven by studies that students' self-confidence increases, their sense of responsibility develops, and they become more social individuals thanks to this model (Arslan and Zengin, 2016; Johnson and Johnson, 1990; Roseth, Johnson and Johnson, 2008). The cooperative learning model supports students' self-concept and autonomy while performing their daily activities in the classroom (Hagger and Chatzisarantis, 2016; Sevil et al., 2016).

In a meta-analysis of 148 studies investigating the effectiveness of collaborative, competitive, and individual goal structures in promoting adolescent success and positive peer relationships, researchers found that higher achievement and positive peer relationships are associated with the collaborative model rather than competitive or individualistic (Roseth, Johnson and Johnson, 2008). Again, it is determined that students in high-level collaborating groups displayed more complex thinking and problem-solving skills in their discourses and answers to questions (Gillies, 2008).

In the findings of the study, it is determined that self-control created a significant difference in favor of the group in which cooperative learning training is given. Cooperative learning has been connected with the development of cognitive, metacognitive and motivational skills that can promote self-regulated learning in students (Efklides, 2008; Järvelä et al., 2008; Arjanggi and Setiowati, 2014). Student's being active during cooperative learning, continuous supportive interaction, encouraging each other give self- regulating skills. (Arslan, 2011)

Based on this, paying close attention to the behaviour and communication of the group members can improve their self- regulation skills not to harm the prosocial commitment.

In this study, it is determined that there is a meaningful difference in the dimensions of respect at school and respect at home as a result of cooperative teaching in favor of the experimental group. Cooperative teaching enables students to respect the ideas of others (Senemoğlu, 1997). Applying the cooperative learning model in Physical Education provides an environment of respect, empathy and first solidarity on which motor practice is based (Sevil et al., 2016). Apart from this, the model affects students' gaining the behavior of respecting others and rules through their experiences (Barney et al., 2016). As a matter of fact, in some studies, it is stated that students show more understanding and respect for the opposite sex after cooperative education (Sánchez-Hernández et al., 2018; Barker and Quennerstedt, 2017). The fact that cooperative learning requires a group work and the existence of elements such as group rewards can enable students to be more understanding and respectful towards each other in order to reach the award.

Conclusion

As a result of the study, it is determined that cooperative learning contributed significantly to the social, emotional and moral development of students. Thanks to the model, students showed improvement in the areas of prosocial behavior, honesty, self-development, self-control, and respect. The absence of such a holistic study in the field and the fact that generally reported socio-emotional development plays a crucial role in predicting different domains such as mental health, academic achievement, and even job performance (Denham et al., 2003; Rubin, Bukowski and Parker, 2007) makes a serious contribution to the literature.

Suggestions

The characteristics of the developmental period can be revealed more clearly by considering the study in terms of cognitive and psychomotor skills. In addition, the inclusion of different learning models (such as sports training model, tactical game model, individualized teaching model) in the study will help to shed light on the subject.

Limitations of the Study

Some limitations should be considered when they interpret the findings of this study. First of all, due to the use of experimental design in the study, the study is limited to a narrow

region and the sample could not be kept wider. For this reason, the results of the study do not represent all secondary schools in Turkey. In addition, the fact that the internal consistency coefficients of the scale in the pre-test result are not very high is due to the fact that the study group is inexperienced in responding to the scale statements, even though they are informed before the study. In addition, the fact that the literature about the study is not very comprehensive causes limitations in the interpretation of the findings. Finally, only the jigsaw technique of the cooperative teaching model is used in the study and the direct teaching model is applied in the control group. There may be other models or techniques that affect the affective skills of the students, but only two models are designed in the study due to the lack of time and expert instructors.

Ethics Committee Permission Information:

Ethics review board: Balikesir University, Social and Human Sciences Ethics Commission

Author Contributions: All authors read and approved the final version of the manuscript. The contributions of all authors have been described in the following manner:

Conception: S.T. conceived the original idea.

Performance of Work: S.T. conceived and planned the experimental settings required for data collection S.T., U.A performed the measurements.

Interpretation or Analysis of Data: S.T.

Preparation of The Manuscript: ST., U.A. took the lead in writing the manuscript S.T. processed the experimental data, performed the analysis, drafted the manuscript.

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