

Athens Institute for Education and Research

ATINER



ATINER's Conference Paper Series

SPO2012-0331

**The Effect of Cooperative Learning
and Traditional Exercise Method
Used in Physical Education and
Sports upon Social Skills of the
Students**

Z. Bahadır

Assistant Professor

Erciyes University, College of Physical Education &

Sports

Turkey

A.Pulur

Assistant Professor

Gazi University, College of Physical Education &

Sports

Turkey

Athens Institute for Education and Research
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209
Email: info@atiner.gr URL: www.atiner.gr
URL Conference Papers Series: www.atiner.gr/papers.htm

Printed in Athens, Greece by the Athens Institute for Education and Research.
All rights reserved. Reproduction is allowed for non-commercial purposes if the
source is fully acknowledged.

ISSN 2241-2891

21/11/2012

An Introduction to ATINER's Conference Paper Series

ATINER started to publish this conference papers series in 2012. It includes only the papers submitted for publication after they were presented at one of the conferences organized by our Institute every year. The papers published in the series have not been refereed and are published as they were submitted by the author. The series serves two purposes. First, we want to disseminate the information as fast as possible. Second, by doing so, the authors can receive comments useful to revise their papers before they are considered for publication in one of ATINER's books, following our standard procedures of a blind review.

Dr. Gregory T. Papanikos
President
Athens Institute for Education and Research

This paper should be cited as follows:

Bahadır, Z. and Pular, A. (2012) “The Effect of Cooperative Learning and Traditional Exercise Method Used in Physical Education and Sports upon Social Skills of the Students” Athens: ATINER'S Conference Paper Series, No: SPO2012-0331.

The Effect of Cooperative Learning and Traditional Exercise Method Used in Physical Education and Sports upon Social Skills of the Students

Z. Bahadır

Assistant Professor

Erciyes University, College of Physical Education & Sports

Turkey

A.Pulur

Assistant Professor

Gazi University, College of Physical Education & Sports

Turkey

Abstract

This research was conducted in order to explore the effect of cooperative learning and traditional exercise method used in physical education and sports upon social skills of the students.

The study was conducted with a total of 63 students (31 girls and 32 boys) who studied at the 7th grade in Kayseri city center and who were selected using simple random sampling method. The students who were sorted out as group A and group B received an 8-week basketball teaching program. The students of group A were trained using “pairs-check-perform” and “Learning Together Technique” of Cooperative Learning Technique whereas the students of group B received “Exercise Method” of traditional teaching method.

As the data collection tools, “Social Skill Scale” developed by Tuncel (2006) was used in order to measure social skills of the students.

The data obtained from the research were analyzed with a statistical package program in a computerized environment. Descriptive statistical methods (frequency, percentages, means, standard deviation), Kolmogorov - Smirnov distribution test (to analyze the data that follow a normal distribution) and independent sample t test (to analyze intergroup comparisons of the parameters that followed a normal distribution) were used for the data analysis. The effect of the group and sex variables upon the difference between the pretest scores and posttest scores was assessed using Repeated Measures ANOVA. Results were considered significant at $p < 0.05$ and ninety-five percent confidence intervals were calculated.

In light of the study results, Cooperative Learning Method used to improve social skills of the students were found to be more effective than Traditional Exercise Method. Cooperative Learning Method improved social skills of girl students and boy students at the same level.

Key Words: Physical Education, Cooperative Learning, Exercise Method, Social Skill.

Contact Information of Corresponding author:

INTRODUCTION

When methods and techniques that enable an effective student participation in the courses are utilized during the learning-teaching process, students learn and remember faster and better and enjoy the activity they are doing. Today, there are many modern methods and techniques that enable an effective student participation in the lesson. Cooperative learning is one of the modern techniques that provide an effective student participation in the courses (Oral, 2000).

Teachers who use cooperative learning method separate the students into small, structured, heterogeneous groups and use activities that provide their social skill development. With cooperative learning method, all of the students are inspired to help their partners and are encouraged to think, to learn and to act together with their partners. This approach aims at realization of affective objectives (such as sharing, helping, listening, taking responsibility and leadership), cognitive objectives (such as problem-solving, creativity and discussion), psycho-motor objectives suitable for physical fitness (movement skills, motor skills). Acquisition of these objectives is highly important for the children (Tuncel, 2006).

Cooperative learning increases not only students' academic success but also their interest in school and courses; improves their critical thinking and social skills; increases their positive attitudes towards the school; creates supportive class-groups that increase their academic performance and self-respect; makes the knowledge permanent; offers the students opportunities by decreasing fear of failure which may prevent their academic success during developmental crisis periods of the adolescents; improves self concept and creates positive effects on their friendship relations (Aydın, 2009). Therefore, we are of the opinion that cooperative learning method which has been tried in many areas at different levels and the benefits of which have been proved will be helpful in eliminating the problems of physical education lesson of primary education.

Because individuals should work together with the group in the cooperative learning, behavior of cooperation becomes more effective. During this period of cooperation, students make courageous attempts such as re-analysis, re-explanation and step-by-step solution of the problem in order to convey their own ideas to their friends.

Thanks to these explanations and cooperation, it becomes inevitable both for the helper and help-receiver to benefit from the helping. Cooperation during this process makes students acquire new perspectives and develop them. It is determined that students make strong connections between what is previously learnt and what is newly learnt, eliminate concept errors and reduce communicational deficiencies between their friends efficiently (Webb, 1985).

When cooperative learning approach is applied, there are many aspects in the groups to be considered. These aspects are important in terms of

increasing productivity of the group and acquiring the wanted behavior among the students. These aspects are defined by Quinn and Jannasch-Pennell (1995) as follows: to talk about the objectives of the course directly, to separate the students into heterogeneous groups, to provide positive intra group unity, to instill into the students the rule “we should learn”, to develop individual sense of responsibility, to increase the general participation awards, to develop award-methods in order to increase the group and the individual success, to provide equal opportunities for success, to make efforts to improve active skills and to provide the students with opportunity to assess the development of intra-group interaction. Teachers play a facilitator role in this educational approach.

Children who lack social skills often experience difficulties in their interpersonal relations at home, at school, at work and in leisure time (Corey, 2005). Social skills play an important role in establishing a healthy interpersonal relation and in school and family life (Deniz, 2002). Children with social skills enjoy the activities in which they participate more and make their own decisions themselves (Çetin et al., 2003). Having social skills provide many advantages that affect life satisfaction positively such as acceptance by their peers, school adaptation, academics success, positive self perception and establishing positive interpersonal relations (Gresham, 1986).

Acceptance or rejection by the group is especially important during primary school period. During this period, social positions of the children are determined and become strongly permanent if not intervened. It is necessary to focus on eliminating deficiencies of social skills of the children who are rejected and shy in case that they may face negative outcomes in the future. Erwin suggests that communicational level relating the social issues affect behaviors and behaviors affect social acceptance in turn. Besides, emotional participation -an important aspect of human relations- and being helpful and having positive attitudes –which partly result from emotional participation- are associated with social acceptance (Hortaçsu, 2003).

Learning together technique, which is one of the cooperative learning techniques, was developed by David Johnson and Roger Johnson at Minnesota University. First application of the technique was made on the heterogeneous groups of 4 or 5 students who worked on a task and were encouraged to produce one product and the technique was based on awarding the group altogether. The first application of the technique emphasized activities of team, structuring and giving feedbacks relating how group members worked together. Learning together technique organizes teaching in terms of the principles of positive commitment, individual responsibility, face to face interaction, social skills and cooperative skills and group process. The most evident difference between learning together technique and other techniques is the more flexible structure and fewer definitive rules that learning together technique has (Johnson and Johnson, 1991, 1998).

Pairs-check-perform approach of Cooperative Learning Techniques, which may be used in Physical Education, was based on Kagan's matched pair control study (1992). It is a kind of cooperative learning approach that requires individuals to continue their tasks and to help their partners. Pairs-check-perform structure can be used for teaching loco-motor skills (e.g. jumping, running), teaching handicrafts and teaching any technique of physical education and any branch of sports and dancing, water-skills exercises.

A good teaching method is the one that is suitable for the properties of activities of learning together with students, enables the students to participate in the activity at the highest level and enables them to act. Methods should be flexible, active, modern, comprehensive and facilitative for participation and cooperation. Exercise method that is used most commonly in the physical education courses and that conveys the course-contents in an easy way is utilized for the improvement of games and activities of physical education courses. In order to obtain effective learning in the exercise technique, teachers should give feedback to the students about their performance. Exercise method is generally used in the team sports after the show has been done. One skill or many skills of the game are repeated and exercised many times. During the exercise; teachers give feedback about the repeated skills done by the team captain or team members (Tamer and Pulur 2001).

METHOD

Research Model

“Pre-test post-test control group model”, one of the experimental models used in education, was used in the present research. The model was administered to two different 7th grade classes which were already formed at the school during the 2010-2011 academic year. All of the students –without any election- were included in the study in order to preserve the natural class conditions.

Two groups were made up through the experimental method used in the research. Independent variable of group A was “Cooperative Learning Method” the effect of which was being analyzed while independent variable of group B was “Exercise Method”. The effect of the same dependent variable was investigated in the groups. As dependent variable, social skill scores were investigated. Pretest and posttest scores were used for the independent variables and analysis of inter-groups was performed. “Cooperative Learning Method” and “Exercise Method”, selected as independent variable, were determined as the variable to be analyzed for group A and group B. It was paid much attention to the fact that the effect of the dependent variables should be equal upon the groups to be analyzed.

The independent and dependent variables to be assessed were examined through the data obtained from group A and group B. The research was designed in pretest posttest control group experimental model.

Population Sample

The research was conducted with study groups. The study groups were consisted of 63 students who studied and took Physical Education Course at the 7th grade of a primary school in Kayseri. Class A in which there were 32 students received Cooperative Learning whereas Class B in which there were 31 students received Exercise Method. The students studied basketball for two hours during 8 weeks. All of the students participated in pretest and posttest and the courses and were analyzed.

No special effort was made in order to match the students and random sampling method was not used because the already existing structure of the classes of the primary school would be used and thus randomization was already ensured and unmatched group model was used.

Collection of the Data

“Social Skill Scale” (SSS) was developed by Tuncel (2006) in order to measure social skills of the 7th grade students in physical education course.

The scale has 31 items and is a Likert-type with 5 options: “I completely agree, I agree, I am uncertain, I do not agree and I do not agree at all”. Accordingly, scores from the SSS subscales range from 9 to 45 in cooperative working, from 7 to 35 in independent working, from 7 to 35 in listening-encouragement, from 8 to 40 in cooperation-sharing and from 31 to 155 in total scores. In order to test the reliability of the SSS in this study, a pilot study with 348 students of 7th grade was conducted. After the pilot study, Cronbach Alpha Reliability Coefficients of the subscales were found to be .86 for cooperative working, .66 for independent working, .85 for listening-encouragement, .78 for cooperation-sharing and .91 in total.

Analysis of the Data

When analyzing the findings obtained from the study, computerized statistical package program was used.

Descriptive statistical methods (frequency, percentages, means, standard deviation) and Kolmogorov - Smirnov distribution test (to analyze the data that follow a normal distribution) were used for the data analysis.

FINDINGS AND DISCUSSION

Table 1: Social Skill Pretest and Posttest Scores and Significant Differences Of Group A

Item	Pretest		Posttest		t	p
	Me d.	Sd.	Me d.	Sd.		
5. It is very entertaining to work with group.	3.69	1.33	5.00	0.00	-5.58	0.000*
9. I can learn better with group.	3.44	1.46	4.94	0.25	-6.10	0.000*
10. If there is something that I do not know, my friend helps me.	4.44	0.76	4.94	0.25	-3.71	0.001*
12. Learning with the group is easier.	3.69	1.26	4.88	0.49	-4.72	0.000*
13. I am having fun sharing my ideas with friends	4.34	0.90	4.88	0.42	-2.87	0.007*
15. Union is strength.	4.53	0.98	4.97	0.18	-2.52	0.017*
16. When I face a problem, I would like to solve it by myself.	2.75	1.30	3.97	1.20	-4.01	0.000*
17. I feel better while working with a group.	3.56	1.46	4.94	0.25	-5.27	0.000*
18. I enjoy listening to different ideas.	4.38	1.10	4.81	0.54	-2.13	0.041*
20. I listen carefully to my friends when they talk.	4.31	1.12	4.75	0.72	-2.08	0.046*
22. My friends' ideas are important for me.	4.50	0.92	4.94	0.25	-3.09	0.004*
24. I believe I will be more successful if I work with a group.	3.78	1.43	4.84	0.45	-3.95	0.000*
26. It makes me happy if my friends are successful.	4.44	1.05	5.00	0.00	-3.04	0.005*
27. I trust in my friends.	4.41	0.98	4.88	0.55	-2.34	0.026*
29. I congratulate my successful friends.	4.34	1.00	4.97	0.18	-3.62	0.001*
30. I say "Come on you can do it" to my friends so that they can do it.	4.47	0.67	4.97	0.18	-4.55	0.000*

**p<0.01

*p<0.05

When the statistical distributions of the answers given to the questions of pretest and posttest scale by the participant students of group A were analyzed and as the result of paired group t test which was performed in order to determine whether mean pretest and mean posttest scores differed significantly while scoring the answers given to the questions of the scale in Table 1; the difference between arithmetical means was found statistically to be significant ($p<0.05$). The increase in the scores of the posttest was found to be important compared to the scores of the pretest.

Table 2: Social Skill Pretest And Posttest Scores And Significant Differences Of Group A

Item	Pretest		Posttest		t	p
	Med	Sd.	Med	Sd.		
4. I keep my ideas for myself.	1.87	1.09	3.39	0.67	-7.73	0.000*
6. I learn more slowly when I work with a group.	2.23	1.28	3.45	0.93	-4.85	0.000*
7. I do not trust knowledge of my friends.	1.52	0.96	3.42	0.77	-10.47	0.000*
8. I am not happy when I am told my mistakes by my friends.	2.42	1.39	4.00	1.07	-5.95	0.000*
11. I prefer working alone to working with a group.	2.32	1.51	3.81	0.83	-4.58	0.000*
14. It makes me anxious when my friends are successful.	1.55	1.03	3.48	0.89	-8.36	0.000*
16. When I face a problem I would like to solve it by myself.	2.77	1.52	3.90	1.01	-3.56	0.001*
19. I learn better when I work alone.	2.65	1.58	3.61	0.84	-3.00	0.005*
20. I listen carefully to my friends when they talk.	4.58	0.85	4.87	0.72	-2.19	0.037*
21. It bores me to work with a group.	2.16	1.29	3.42	0.67	-5.13	0.000*
23. I am more successful when I work without any help from anybody.	2.23	1.36	3.65	0.88	-5.52	0.000*
25. I do not like sharing my ideas.	1.29	0.69	3.48	0.77	-11.02	0.000*
28. I work longer when I work alone.	3.23	1.67	4.23	1.09	-2.93	0.006*
31. I do not like working with others.	1.65	1.08	3.48	1.03	-6.79	0.000*

**p<0,01

*p<0,05

When the statistical distributions of the answers given to the questions of pretest and posttest scale by the participant students of group B were analyzed and as the result of paired group t test which was performed in order to determine whether mean pretest and mean posttest scores differed significantly while scoring the answers given to the questions of the scale in Table 2: the difference between arithmetical means was found statistically to be significant ($p<0.05$). The increase in the scores of the posttest was found to be important compared to the scores of the pretest.

Table 3: Variance Analysis Results According To Sss Pretest Scores Of Girl And Boy Students Of The Groups

VK	KT	Sd	KO	F	p
GA	911.258	3	303.753	1.010	.395
GI	17739.345	59	300.667		
GENERAL	18650.603	62			

$p > 0.05$

When Table 3 was analyzed; it was noted that there was not a statistically significant difference between SSS pretest means of the girl students and boy students of Group A and Group B. In light of this finding, it may be suggested that girl students and boy students of Group A and Group B were similar before the study/operation*group in terms of social skills.

Table 4: Anova Results According To Sss Pretest Scores

SOURCE	CT	df	CO	F	p	Eta Square
Operation	259.464	1	259.464	1.436	.236	.024
Operation*sex	67.092	1	67.092	.371	.545	.006
Operation*group	3165.783	1	3165.783	17.521	.000*	.229
Operation*sex*group	43.291	1	43.291	.240	.626	.004
Error	10660.393	59	180.685			

$*p < 0.05$

When Table 4 was analyzed; it was observed that operation*group interaction had a significant effect on social skills of the students ($p < 0.05$). According to these findings, being in different experimental process group affected total social skill score. The increase in social skill in Group A was higher compared to Group B. The effect of operation*group interaction upon total social skill score was by 22.9%. Operation*sex interaction did not have a significant effect on social skills of the students. As the statistical analysis performed, Operation*sex*group interaction did not have a significant effect on social skills of the students, either.

CONCLUSION

It was explored that the tendencies of the students who participated in activities of cooperative learning increased in finding group work more entertaining, learning better and believing to be successful with group work, feeling better while studying with group, enjoying helping their friends and sharing ideas, valuing and listening carefully the ideas of their friends, trusting

in their friends and being happy with their success, congratulating successful friends and enjoying listening different ideas.

In this study; with cooperative learning, students learnt team spirit, being motivated, developing the skills of the group members by helping each other, better mutual communication, listening to friends, constructive criticism, working by turns, producing and sharing ideas with their friends. As a conclusion, cooperative learning is concluded to be a strong method that develops social skills of the students.

When correlation between social skills of the students and sex was analyzed in relation to cooperative working; cooperative learning was found to be improving social skills of both girl students and boy students positively and at an equal rate.

When the answers of the students who used Traditional Exercise method were analyzed, it was observed that individual thinking and individual behavior patterns were more dominant among these students, working with group slowed down their learning and was found to be boring, group dynamism and working habits with others were not adopted enough, corporation and solidarity were ignored in problem solving and individual problem solving behaviors predominated.

As the result of the study; it was proved that Cooperative Learning method increased social skills of the students considerably and Cooperative Learning method improved social skills of both girl students and boy students at the same level compared to Exercise Method. It was concluded that Cooperative Learning Method was more effective in increasing Social Skills of the students than Exercise Method.

RECOMMENDATIONS

In light of the study results, we are of the opinion that it will be useful that institutions that train physical education teachers and researchers who conduct studies in this field should investigate the following topics in relation to different teaching approaches:

- Courses taught with cooperative learning method may be incorporated into different methods, theories, models and strategies and applied to physical education and sports courses, different sportive branches and different classes and different fields.
- Interaction of different methods and favorable properties of this interaction in the students may be examined.
- Educational programs the contents of which are not necessarily/entirely consisted of cooperative learning but involve cooperative learning may be designed and applied and the effect of these programs on social skills may be investigated.

- Comparing cooperative learning method and different learning methods, the effects of both methods on social skills may be studied.

REFERENCES

- Aydın, F. (2009). The effects of cooperative learning on the success, attitude and motivation of 10 th grade Geography Lesson, Unpublished Doctorate Thesis, Gazi University, Institute of Education Sciences, Ankara.
- Corey, G. (2005). Psychological Counseling, Psychotherapy Theories and Application, 7th Edition, Ankara, Mentis Publication.
- Çetin, F., Alpa Bilbay, A., Albayrak Kaymak, D. (2003). "Social Skills among the Children from Research to Application" (3rd Edition), Istanbul, Epsilon Publication.
- Deniz, M. E. (2002). A Comparative Evaluation of decision strategies and social skill levels of university students in terms of some characteristics. Doctorate Thesis, Selcuk University, Institute of Social Sciences, Konya.
- Gresham, F.M. (1986). "Conceptual issues in the assessment of social competence in children", In P.S.
- Hortaçsu, N. (2003). Relations among the children, İmge Bookstore, Istanbul.
- Johnson, D. W., Johnson, R.T., Smith, K.A. (1991). Active Learning: Cooperation in the College Classroom; Inter Action Book Company: Edina, MN.
- Johnson, D. W., Johnson, R. T. (1998). Cooperative Learning Return to College. Change, 30, 4.
- Kagan, S. (1992). Cooperative Learning (2th ed.). San Clemente. CA: Kagan Cooperative Learning.
- Oral, B. (2000). The effect of cooperative learning and group work upon course attainment, course attitudes and permanence of the knowledge learned, Çukurova University, EF Journal, p.43-49.
- Quinn, M. M. Ve A. Jannasch-Pennell. (1995). Using peers as social skill straining agent for students with antisocial behavior. Preventing School Failure. 39(4). p26.
- Tamer, K. Ve Pular, A. (2001). Physical Education and Teaching Methods in Sports, Ada Publication, Ankara
- Tunçel, Z. (2006). The effects of Cooperative Learning upon physical education success, cognitional processes and social behaviors. Unpublished Doctorate Thesis, Dokuz Eylül Univeristy, Institute of Education Sciences, Izmir.
- Webb, N. (1985). Student Interaction and Learning in small Groups, Learning to Cooperate, Cooperate to Learn, (Edited by Robert Slavin vd.), New York Plenum Pres, 147-172.