



EFFECTS OF COOPERATIVE LEARNING ON PROSPECTIVE TEACHERS' ACHIEVEMENT AND SOCIAL INTERACTIONS

İŞBİRLİKLİ ÖĞRENMENİN ÖĞRETMEN ADAYLARININ AKADEMİK BAŞARI VE SOSYAL İLİŞKİLERİNE ETKİSİ

Z. Canan CANDAN KARABABA *

ABSTRACT: The aim of this study is to examine the effects of cooperative learning on the achievement of Turkish prospective elementary school teachers' learning of the content of the Turkish language course and on their social interaction in the classroom. The theoretical question addressed was whether the positive interdependence within cooperative groups would lead students in those groups to have greater achievement and more social interaction. Eighty prospective elementary school teachers were randomly assigned to cooperative (n = 40) and individualistic (n = 40) conditions. The experimental sessions were held two hours a week for four weeks. Results indicated no effect on academic achievement. Rather, students in the cooperative condition were more involved in positive and supportive relationships with their classmates compared to students in the individualistic learning. Students in the cooperative condition initiated more conversations with their classmates and had more support than the others. The generalization of the results of this study is limited by the length of the study, types of tasks, and the skill of the instructor. The results are robust because of the random assignment of students to conditions, and the use of the same instructor to teach both of the learning contexts.

Keywords: Turkish learning, cooperative learning, prospective teacher, learning, achievement

ÖZET: Bu çalışmada işbirlikli öğrenmenin öğretmen adaylarının Türkçe dersinin içeriğini öğrenmelerine ve genel sınıf iklimine etkileri ele alınmaktadır. Kuramsal çerçevede araştırma sorusu işbirlikli öğrenmenin oluşturduğuna inanılan birlikteliğin akademik başarı ve olumlu sosyal ilişkilerin oluşmasına etkisi olup olmadığıdır. Çalışmaya toplam 80 öğretmen adayı katılmıştır ve rastgele bir şekilde 40'ar kişilik iki gruba (işbirlikli ve bireysel çalışma grupları) ayrılmıştır. Deneysel nitelikteki ders izleme çalışmaları haftada iki saat ve toplam 4 hafta sürmüş öğrencilerin akademik başarıları ders sürecinin sonunda yapılan yazılı sınav aracılığıyla ölçülmüştür. Araştırmanın sonuçları işbirlikli grupta öğrenim görmüş olan adaylarla bireysel öğrenim görmüş adaylar arasında akademik başarı açısından fark olmadığını ortaya koymuştur. Bununla beraber, işbirlikli öğrenme ortamında öğrencilerin sosyal ilişki kurmada (tartışmalara katılma gibi) daha başarılı oldukları görülmüştür. Araştırmanın sonuçları, çalışmanın süresi, etkinliklerin çeşitliliği ve öğreticinin becerileri ile sınırlıdır. Buna karşın sonuçlar öğrencilerin rastgele dağılımları ve iki gruba da aynı öğreticinin gözetmenlik etmesi açısından önemlidir.

Anahtar sözcükler: Türkçe öğrenimi, işbirlikli öğrenme, öğretmen adayı, öğrenme, akademik başarı

1. INTRODUCTION

In the last two decades, research on school-based group work processes gained momentum in a significant manner (Schmuck and Schmuck, 2001). With the increased emphasis on school effectiveness, group-dynamics research was applied more and more in classrooms and amongst school staff largely because of the view that strategies associated with cooperative learning must be initiated by teachers along with strong support coming from school administrators. However, when the classroom dynamics are considered, teachers can choose to promote competition amongst the students often by encouraging individualized work. From another corner, they can try to support cooperation in their classes all of which result in different learning outcomes. Although both of these instructional attitudes have their particular positive outcomes, research shows that cooperative learning can facilitate reaching academic excellence through the development of the affective domain (Schmuck and Schmuck, 2001).

Cooperative learning initiates each student striving for a learning outcome that is planned to be effective for all members of the group. In such a learning environment, personal goals of individual students are closely linked together with others'. In the 20th century, over 550 experimental and 100 co- relational studies have been conducted with subjects at different ages, in different areas of study, and in different settings (Johnson and Johnson, 1989). This body of research has shown that having

* Asst. Prof. Dr., Ankara University, Faculty of Educational Sciences, canan.karababa@education.ankara.edu.tr

students work interdependently can increase their feelings of support of one another while developing their self-esteem and academic achievement. This body of research has also shown that sense of belonging, working together, taking risks, and encouraging each other become instructional strategies that teachers employ in their classrooms (Moberly, 1996). There are a number of studies examining the positive effects of cooperative learning. For example, interpersonal attraction, perspective taking and social support are the most commonly studied variables in such research. Slavin's (1985) meta-analytical study found that 12 out of 14 studies on cooperative learning and inter-group relations showed that cooperative learning had positive effect on building positive social relationships. Similarly, Mueller (1992) found that cooperative work affects students' development of autonomy, sense of purpose, and building and maintaining mature interpersonal relationships. Research has also shown that even in countries where individualized learning has traditionally been favored over group work, cooperative work has received positive support coming from teachers as well as students (Li and Campbell, 2008).

Research has articulated many strategies, or elements, to foster the success of cooperative learning. Despite the existence of these general strategies, five essential elements of cooperative learning are advised to be put into effect in any lesson to foster collaborative learning (Johnson and Johnson, 2002). The first and most important element is positive interdependence. Positive interdependence occurs as group members realize that one cannot succeed without the rest of the students. Hence, positive interdependence necessitates a commitment to sharing as well as building onto other people's success. The second essential element of cooperative learning is individual accountability which demands each member of the group to be accountable for contributing his or her share of the work. Promotive interaction, the third of these elements, refers to employing face-to-face interaction which can also occur in the virtual world while doing the work. In promotive interaction, members share information and resources and help, support, encourage, and praise each other's efforts in learning. The fourth essential element of cooperative learning is teaching students the required interpersonal and small-group skills including effective leadership, decision-making, trust-building, communication, and conflict-management skills. The fifth essential component of cooperative learning is group processing. Group processing exist when group members have time allotted to discuss how well they are achieving their goals and maintaining effective working relationships (Johnson and Johnson, 1994; Johnson and Johnson, 1995; Johnson, Johnson, and Holubec, 1998a; Johnson, Johnson, and Holubec, 1998b).

Cooperative learning, as an educational concept originated from the work on social interdependence and for several decades, cooperative learning has been used extensively as an instructional method across many school levels, diverse subject areas, and various learning environments (Johnson, Johnson, and Stanne, 2000). Since the early 1970s, various cooperative learning methods have been used in classrooms some of which are learning together, jigsaws, teams-games-tournaments (TGT), student-team-achievement-divisions (STAD), team-assisted instruction (TAI) and the co-op procedures are the most popular ones (Johnson, Johnson, and Holubec, 1998). Cooperative learning is shown to result in frequent communication and contact, so it causes increasing interpersonal attraction (Aronson, Wilson, and Akert, 1999). The relationship between cooperative learning and interpersonal attraction may be partially the results of frequent and accurate communication occurring among people (Deutsch, 1973).

In terms of classroom dynamics, learners tend to choose friends of their preference based on their own race and gender. Therefore, if they do not have opportunities to work with other classmates, their friendship should always be limited to their own preference without contacting other children who have diverse background. Furthermore, they may persist stereotyping and biases to others which is a sad phenomenon (Cowie, Smith, Boulton, and Laver, 1994). Ability of perspective taking can be developed through involving in cooperative learning activities which helps learners to understand how a situation appears to them and how they react cognitively and emotionally to a situation (Johnson and Johnson, 1998). In such a situation, social support becomes an important asset since it necessitates being available to those on whom one can rely for emotional, instrumental, informational, and appraisal aid (Johnson and Johnson, 2002). When students feel they are receiving social support from

their classmates, their behaviour is expected to be more pro-social than aggressive. Also, the concept of social support is apparently opposite to bullying others since social support through cooperative learning can make an important impact on preventing or decreasing bullying in and around the classroom environment. According to Johnson and Johnson (2002), cooperation promotes greater social support than individualistic efforts situated at the school environment.

Johnson and Johnson (1983) found that the relationship between cooperative attitude and cooperative experiences were also related to the perceived support and acceptance coming from peers and teachers. Thus, it can be claimed that the support coming from the other members of the instructional unit is of great importance. However, the effect of cooperative learning on perceived support and acceptance can both be long-termed as well as short termed both of which have great impact on the improvement of social relationships situated within the classroom. Cowie and others (1994) describe three essential features of cooperative work that improves social relationships. First, cooperative group work brings together those who are traditionally segregated. The positive impact of cooperative learning on these students segregated has been a strong argument raised by others such as Johnson and Johnson (2002). Cowie and others (1994) insisted that cooperative interaction, first, may help reduce prejudice and may foster trust across ethnic and gender groups. Second, children in cooperatively working groups communicate and share information in order to achieve common goals. This goal oriented process may range from learning a word in a foreign language (Ghazal, 2007) to a whole concept (Vygotsky, 1978). Therefore, as different students work together, positive interdependence develops among these individuals. Third, in a cooperative group work, learners still have conflicts which should carefully be examined so that such conflict is managed and resolved.

Just as the aforementioned research points out, the move towards applying the principles of cooperative learning into all aspects of education has become a widespread phenomenon in today's educational realm. The new basic compulsory education curriculum in Turkey which started in the academic year of 2005–2006 is based on constructivist approach in an attempt to replace traditional educational design that is affected largely from the principles of behaviorism. Prior to making these changes, however, little research on the effect of constructivist teaching strategies had been produced and the need for such research is still needed to evaluate its success (Kesal and Aksu, 2005). Similarly, as Yıldız (1999: 162) articulates, this need is most visible in the departments of Faculty of Education because the graduates of these programs 'must be educated within processes of such applications' since they will have to use such strategies in their future teaching settings. Hence, the aim of this quasi-experimental study is to examine the effects of cooperative learning on the achievement of Turkish prospective elementary school teachers and on their overall social interaction in the classroom. It is believed that such research will shed light onto cooperative learning principles' degree of effectiveness in Turkish educational settings.

2. METHODS

This study employed a quasi-experimental study design with the following components.

2.1. Sample

The subjects were 80 prospective elementary school teachers taking the "Turkish Syntax" course offered at Ankara University's Faculty of Educational Science. The students' ages ranged from 19 to 25 with an average age of 21. They were randomly assigned to work in the cooperative learning group (experimental group) and individualistic (control group) and both groups had 40 students. The socio-cultural and economic backgrounds of the students were also checked on by means of a statistical interrogation of demographical questions which revealed no significant inter-group difference.

2.2. Instruments

2.2.1 The questionnaire

The Classroom Life Measure, which was prepared by Johnson, Johnson, Buckman, and Richards (1985) was used in this study. The instrument aimed to assess the quality of social interaction within an instructional unit. The questionnaire consisted of 22 Likert-type questions to which respondents indicate their choices on a 5-point scale. This short version of the instrument contains five domains that have been identified, selected, and used because of their sound reliability that has been shown theoretically and through previous factor analyses. The reliability coefficients of these five subscales ranged between $r=.51$ and $r=.80$ with an arithmetic mean of $r=.74$. In this present study, the reliability coefficient of these subscales ranged between $r=.50$ and $r=.78$ with an arithmetic mean of $r=.72$, suggesting a moderately high internal consistency of the overall scale used as the instrument of data collection. This relatively lower internal consistency, when compared to the original results coming from its original application, may have resulted from the relatively lower number of group members participating in the study. However, this numerical evidence of the reliability of the instrument makes it a reliable instrument for the purposes of this study.

The five domains the questionnaire aimed to study were teacher academic support, teacher personal support, student-student academic support, student-student personal support and cohesion. These domains, as indicated above in the introduction, were thought as support mechanisms which fostered students' learning. Therefore, it was hypothesized that the higher the results of the domains were, the more positive outcomes could the students achieve in their learning.

2.2.2. Academic success

In terms of measuring the academic success of the students prior to participating in the study, students' previous course grades were used to guarantee that the groups formed by students with similar academic success.

2.2.3. Exams

Similarly, the academic success measured during this particular study made use of traditional open-ended exams which were primarily prepared by the researcher and were then controlled by two experts in the field. These exams contained three essay type questions with the following load:

- one question (25 points) focused on explanation of Turkish syntax in general terms as covered in the course work,
- one question (25 points) asked students to interpret and discuss a particular syntactical pattern in contemporary Turkish,
- one question contained five sub-questions, each question asking students to articulate the meaning of one particular concept or term by exemplifying it in real life terms and contemporary language usage. Each sub-question in this question weighed ten points. The whole exam weighed 100 points.

A scoring rubric in percentile system was adopted and the papers were graded on the content, not punishing for erroneous language or spelling use. The rubric used by the researcher contained grades to be given in 0 and 5 digits only. Hence, no grade was given, for instance, between 80 and 85 or 90 and 95. Following this first round of marking, a graduate student who was not acknowledged about the design or purpose of the research study marked the papers by using the same rubric. In order to make sure that the scores in pretest and posttest were reliable and to explore the consistency of the scores the inter-rater reliability of the scores was assessed through Cronbach's Alpha value and correlation of the scores of the two raters was estimated by Pearson correlation. It was found that the raters' scores were significantly correlated at the 0.01 level. Table 1 shows the results of the inter-rater reliability of the raters' scores for the pre and post tests in experimental and control groups.

Table 1. Inter-rater reliability of the raters' scores in pretest and posttest of writing in experimental and control groups

Raters	Inter-rater reliability (Pretest)	Inter-rater reliability (Post test)
1 & 2	.94	.96

As table 1 shows, the inter-rater reliability assessed using Cronbach's Alpha ranged between .94-.96, indicating high agreement between the two raters' scoring with .95 arithmetic mean. Hence, the exact agreement shows a very high inter-rater reliability of students' papers (Huck, 2008: 81).

2.3. Data Analysis

The data analysis was completed with the help of the SPSS program. The arithmetic means of the exam and the five domains, along with their standard deviations were measured and the study used .05 as the significance level for the p value. The independent variable was cooperative versus individualistic instruction. The dependent variables were achievement in their exams and students' level of social interaction. The control variables in this research study were class level, age, and that the participants did not have prior knowledge of that knowledge to be given in the application. To reduce any impact some variables might have on the variables under study, the groups' socio-economic backgrounds were also checked and no significant difference was found among the groups. One-tailed t-test was used to determine the significance of the differences between conditions.

2.4. Treatment

The experimental sessions were held two hours a week for 4 weeks. Each cooperative session was observed daily to make sure that the instructional method was being carried out appropriately. The instructor was informed about using the cooperative learning strategies to be employed in the classroom. In the cooperative instructional design, students were randomly assigned to teams on a stratified random basis. Each team was given the cooperative goals while making sure that each team member shared their own resources and mastered the material in that specific unit. The trainees were informed that, should any member of their team received above 60 as a grade, the entire team would have 5 additional points. Each student was also individually accountable to pass the examination.

Three types of cooperative activities were applied during the instructional sessions. Informal cooperative activities were short, 3-minute discussions during the lectures about the information being covered. Examples included having trainees (a) turning to the person nearest them during a lecture and clarifying a point being made in the lecture and (b) forming a post-lecture triad and identifying the three most important points in the instructor's lecture. Formal cooperative activities were carefully structured assignments that required team members to work together to complete the assignments successfully, for example, to complete an in-class assignment ensuring that (a) each team member suggested possible answers to the questions, (b) the group came to a consensus on the best answer to each question, and (c) each member understood the question and the answer and was able to explain both to the instructor.

Finally, cooperative base groups of three or four students were established at the beginning of the block of instruction. The trainees met at the beginning and end of each day of instruction to ensure that each member had completed the homework and understood the material. Base groups were responsible for devising study plans that ensured each member completed the homework, learned the assigned material, studied, received help and support when it was needed, and was prepared to prepare the assignment.

The control condition consisted of the traditional lecture/ individualistic instructional methods. The traditional instructional procedure required the staff lecture and have students search for questions to answer them in the classroom. The trainees were told that they should study together in the evening, but the individualistic instructional structure used within the class did not provide any procedure or guidance for doing activities as such. Also, throughout the research process, it was made sure that all

steps in treatment and measurement were completed under the guidance of field experts who advised and controlled the steps taken during the research study.

3. RESULTS

As can be seen in Table 1, the students who worked within the cooperative instructional design scored higher than those who worked individually in the closed-book/recognition portion of the examination (1.15% of difference between groups). However, this difference is not statistically significant ($p=0.605$). Hence, although there is no statistically significant difference between these groups, the fact that none of the trainees in the cooperative learning group received a failing grade shows the positive quality of it. In contrast to this achievement, in the traditional group, 20% of the trainees (8 students) received failing grades.

As the analyses of the data suggest, the more interaction took place within the cooperative group, the higher scores they received in the exam. Although on-task statements (information statements such as directions, reading, echoing, and task management) correlated most highly with achievement, off-task statements such as the negative statements and humor correlated negatively with achievement.

In terms of the domains, the questionnaire results suggest that both teacher academic support and student-student academic support were considered by the cooperative group in a more positive way although the differences are not significant. However, when the other three domains (teacher personal support, student-student personal support, and cohesion) were considered, it can be seen that both the results of the cooperative group were higher and the differences were significant.

In terms of the student-student academic support, the cooperative group found the classroom instruction and interaction to be supportive whereas the individualized group of learners evaluated the classroom interaction as less conducive to learning that is it can be claimed that they received lesser support coming from their peers. At last but not least, in terms of cohesion, the cooperative group scored higher with a significant difference towards the cooperative group. In short, it can be concluded that cooperative learning and the degree of academic support provided by teachers are positively correlated with achievement.

Table 2. The Effect of Cooperative Learning on Sub-dimensions

Measure	Group	Mean	SD	t	p
Achievement	Individualized	71.75	10.04	-0.526	0.605
	Cooperative	72.90	9.52		
Teacher Academic Support	Individualized	3,50	0,80	-1,256	0,215
	Cooperative	3,79	0,79		
Teacher Personal Support	Individualized	2,58	0,76	-1,167	0,249
	Cooperative	2,89	1,10		
Student-Student Academic Support	Individualized	2,91	0,64	-4,250	0,000
	Cooperative	3,65	0,52		
Student-Student Personal Support	Individualized	2,91	0,64	-4,371	0,000
	Cooperative	3,65	0,52		
Cohesion	Individualized	3,12	0,67	-2,964	0,005
	Cooperative	3,70	0,67		

4. DISCUSSION

The findings of this study are in congruence with Slavin's (1985) study in that cooperative learning and inter-group relations showed positive effects on social relationships. Similarly, findings of this study also support Johnson and Johnson's findings (1983) in that cooperative attitude and

cooperative experiences were related to the perceiving supported and accepted by peers and teachers personally as well as academically. However, there are limitations to this study two of which are of utmost importance. First, the application time was rather short and a longitudinal treatment would make more sense in generalizing the findings of the study. Second, the examination procedure did not aim at assessing what is kept in students' long term memory. Hence, the conclusions drawn from this study are rather difficult to generalize. However, because the results of this study are in congruence with some related research, additional studies, if produce similar results, will show the benefits associated with cooperative learning.

It is known that prospective teachers learn to teach by relying on their experiences as students. That is often the reason why many teachers believe that lecturing is the easiest and harmless way to teach. However, recent trends in education have now shown that this belief must be changed as soon as possible. Hence, prospective teachers who are expected to incorporate cooperative strategies in their teaching must learn how to teach these cooperative strategies first by learning through such strategies. In this research study, it is shown that the benefits of learning by means of cooperative learning strategies are numerous. Cooperative learning has been shown to be effective in defusing tensions in a classroom simply because such strategies turn the focus to interpersonal communication and the development of social skills (Johnson, et, al., 1990). In such a learning environment, it seems natural for prospective teachers to make use of these strategies in their future teaching environments by making them fundamental part of teaching repertoire.

Based on the findings of this study, several suggestions for further studies can be given. First, some other variables can be recommended for future research such as an analysis tapping different kinds of support which might provide more comprehensive ideas about how teacher-student and/or student-student support are related to achievement in learning. The findings of this study also support the view that contemporary education should carefully employ the principles of cooperative learning (Üstünel and Demirel, 2002: 87) while planning and assessing the overall learning and teaching processes (Sönmez, 2007: 132). Similarly, these results lend support to the view that cooperative learning should be used in the teaching and learning of Turkish language.

Prior research on collaborative learning identified student behaviors that significantly predict student achievement among which giving explanations of one's thinking is the most obvious one (Webb, et. al., 2008). However, they also claimed that the role of teachers' instructional practices in developing collaboration among students remains less studied. Hence, research on all aspects of undergraduate teacher preparation programs and alternative teacher certification programs must delve into these issues so that future applications can be foreshadowed. Similarly, future research must look into all aspects of cooperative learning especially as they occur in teacher education contexts. While doing that, qualitative research looking deeper into the relationship between cooperative learning and academic success should be employed rather than quantitative studies which are rather more popular in Turkish educational research (Ural, Umay and Argün, 2008).

REFERENCES

- Aronson, E., Wilson, T.D., & Akert, R. (1999). *Social psychology* (3rd. ed.) New York: Addison-Wesley Longman.
- Cowie, H., Smith, P., Boulton, M., & Laver, R. (1994). *Cooperation in the multi-ethnic classroom*. London: David Fulton.
- Deutsch, M. (1962). Cooperation and trust: Some theoretical notes. In M. Jones (Eds.), *Nebraska symposium on motivation* (pp. 275-319). Nebraska: Lincoln University of Nebraska Press.
- Deutsch, M. (1973). *The resolution of conflict*. New Haven, CT: Yale University Press.
- Ghazal, L. (2007). Learning vocabulary in EFL contexts through vocabulary learning strategies. *Novitas-ROYAL (Research on Youth and Language)*, 1(2), 84-91.
- Huck, S. W. (2008). *Reading statistics and research* (5th ed.). Boston: Pearson.
- Johnson, D.W., & Johnson, R. (1989). *Cooperation and competition: Theory and research*. Edina, MN: Interaction Book Company.
- Johnson, D.W., & Johnson, R.T. (1990). Cooperative learning and achievement. In S. Sharan (Eds.), *Cooperative Learning: Theory and research* (pp.23-37). Westport, CT: Praeger.
- Johnson, D. W., & Johnson, R. (1994). *Leading the cooperative school* (2nd ed.) Edina, MN: Interaction Book Company.

- Johnson, D. W., & Johnson, R. (1995). *Teaching students to be peacemakers*. Edina, MN: Interaction Book Company.
- Johnson, D. W. & Johnson, R. (2002). *Meaningful assessment: A manageable and cooperative process*. Boston: Allyn and Bacon.
- Johnson, D.W., Johnson, R.T., Buckman, L.A., & Richards, P.S. (1985). The effect of prolonged implementation of cooperative learning on social support within the classroom. *Journal of Psychology*, 119, 405 – 411.
- Johnson, D. W., Johnson, R. & Holubec, E. (1998a). *Cooperation in the classroom* (6th ed.). Edina, MN: Interaction Book Company.
- Johnson, D. W., Johnson, R. & Holubec, E. (1998b). *Advanced cooperative learning* (3rd ed.). Edina, MN: Interaction Book Company.
- Johnson, D. W., Johnson, R. & Smith, K. (1998). *Active Learning: Cooperation in the college classroom* (2nd ed.). Edina, MN: Interaction Book Company.
- Johnson, D., Johnson, R. & Stanne, M. (2000). *Cooperative learning methods: A meta-analysis*. Retrieved on April 22, 2008 from <http://www.co-operation.org/pages/cl-methods.html>
- Kesal, F., & Aksu, M. (2005). Constructivist learning environment in ELT Methodology II courses. *Hacettepe University Journal of Faculty of Education*, 28, 118-126.
- Li, M., & Campbell, J. (2008). Asian students' perceptions of group work and group assignments in a New Zealand tertiary institution. *Intercultural Education*, 19(3), 203-216.
- Moberly, D. A. (1996). *Curriculum planning of pre-kindergarten, kindergarten, first, second, and third grade teachers who believe in developmentally appropriate practice and the whole language philosophy*. Southern University, Unpublished Dissertation, Carbondale.
- Mueller, S. L. (1992). The effect of a cooperative education work experience on autonomy, sense of purpose, and mature interpersonal relationships. *Journal of Cooperative Education*, 27(3), 27-35.
- Slavin, R. (1985). Introduction to cooperative learning. In R. Slavin, S. Sharan, S. Kagan, R. Hertz-Lazarowitz, C. Webb., and R. Schmuck (Eds.), *Learning to cooperate, cooperating to learn* (pp. 5-15). New York: Plenum Press.
- Sönmez, V. (2007). *Öğretim ilke ve yöntemleri*, Ankara: Anı Yayıncılık.
- Ural, A., Umay, A., & Argün, Z. (2008). *Öğrenci takımları başarı bölümleri tekniği temelli eğitimin matematikte akademik başarı ve özyeterliliğe etkisi*. *Hacettepe University Journal of Faculty of Education*, 35, 307-318.
- Üstünel, E., & Demirel, Ö. (2002). Program geliştirmede yapılandırmacılık yaklaşımı. *Hacettepe University Journal of Education*, 23, 81-87.
- Vygotsky, L. (1978). *Mind in society - The development of higher psychological processes*. Cambridge: Harvard University Press.
- Webb, N. M., Franke, M. L., Ing, M., Chan, A., De, T., Freund, D., & Battey, D. (2008). The role of teachers' instructional practices in student collaboration. *Contemporary Educational Psychology*, 33(3), 360-381.
- Yıldız, V. (1999). İşbirlikli öğrenme ile geleneksel öğrenme grupları arasındaki farklar. *Hacettepe University Journal of Faculty of Education*, 16-17, 155-163.

GENİŞLETİLMİŞ ÖZET

İşbirlikli öğrenme her öğrenciyi, grubun tamamındaki bireylerin etkileşimi yoluyla ortaya çıkacak olan kolektif öğrenim başarısı için çalışma grubu içerisinde bireysel çaba sarf etmeye alıştıırır. Bu tür bir öğrenme ortamında birey olarak öğrencilerin kişisel amaçları diğerlerinininkiyle yakından ilişkilidir. 20. yy da 550 deneysel ve 100 korelasyonel çalışma farklı yaştaki katılımcılarla, farklı çalışma alanlarında ve farklı deney ortamlarında gerçekleştirilmiştir. Bu yoğun araştırmalar göstermiştir ki öğrencilerin bağımsız olarak çalıştırılmaları özgüvenlerini ve akademik başarılarını geliştirirken birbirlerine destek olma duygularını da arttırabilmektedir. Bu yoğun araştırmalar yine göstermiştir ki aidiyet duygusu, beraber çalışma, risk alma ve birbirini cesaretlendirme öğretmenlerin derslerinde kullandıkları eğitim stratejilerine dönüşmektedir.

Çeşitli çalışmaların da gösterdiği gibi işbirlikli öğrenmenin prensiplerini eğitimin her aşamasında uygulamaya doğru bir yöneliş bugünün eğitim dünyasında yaygın bir eğilim haline gelmiştir. Türkiye’de 2005-2006 akademik yılında başlamış olan yeni program, zorunlu temel eğitimde, büyük oranda davranışçılık prensiplerinden etkilenmiş olan geleneksel eğitim planının değiştirilmesi girişimi ile yapılandırmacı yaklaşım temel alınarak hazırlanmıştır. Bu çalışmanın amacı işbirlikli öğrenmenin, ilköğretimde öğretmenlik yapacak olan Türk öğretmen adaylarının, başarıları ve sınıftaki tüm sosyal etkileşimlerinin üzerindeki etkisini incelemektir. Katılımcılar Ankara Üniversitesi Eğitim Fakültesi’nde Türk Dili II Söz Dizimi adı altında verilmekte olan dersi almakta

olan 80 aday ilköğretim öğretmeninden oluşmaktadır. Öğrencilerin yaşları 19 ila 25 arasında olup, ortalama 21 dir. Öğrenciler gelişigüzel bir şekilde işbirlikli öğrenme grubunda (deney grubu) ve bireysel grupta (kontrol grubu) çalışmak üzere seçilmiştir. Her iki grup 40 öğrenciden oluşmaktadır. Bu çalışmada Johnson, Johnson, Buckman ve Richards (1985) tarafından hazırlanmış olan Sınıf İklimi Ölçeği kullanılmıştır. Araç eğitimsel bir birimdeki sosyal etkileşimin niteliğini değerlendirme amaçlıdır. Anket katılımcılarının seçimlerini 5 aşamalı ölçekle belirttikleri 22 soruluk Likert tipi sorudan oluşmaktadır. Önceki faktör analizleri göstermiştir ki bu 5 alt ölçeğin güvenilirlik katsayıları $r=0.74$ lük bir ortalamayla $r=0.51$ ile $r=0.80$ arasındadır. Ankette incelenmenin hedeflendiği 5 etki alanı öğretmenin akademik desteği, öğretmenin bireysel desteği, öğrencinin öğrenciye akademik desteği, öğrencinin öğrenciye bireysel desteği ve tutarlılıktan oluşmaktadır. Bu etki alanları yukarıda giriş bölümünde de ifade edildiği gibi öğrencilerin öğrenmelerini geliştiren destek mekanizmaları olarak düşünülmüştür. Böylelikle etki alanlarının sonuçları ne kadar yüksekse, öğrencilerin öğrenmelerinde o derece olumlu sonuçlar elde edebileceği hipotezi geliştirilmiştir.

Veri analizi SPSS programı kullanılarak tamamlanmıştır. Sınavın aritmetik ortası ve standart sapmalarıyla birlikte 5 etki alanı (faktörler) ölçülmüştür ve çalışmada p değeri için anlamlılık düzeyi 0.5 olarak belirlenmiştir. Bağımsız değişken bireysel öğretime karşı işbirlikli öğretimdir. Bağımlı değişkenler öğrencilerin sınavdaki başarıları ve sosyal etkileşimdeki seviyeleridir. Durumlar arasındaki farklılıkların önemini belirlemede tek yönlü t testi kullanılmıştır.

Deney oturumları 4 haftalık bir süreçte haftada iki oturum olarak gerçekleştirilmiştir. Her işbirlikli oturum eğitimsel metodun uygun bir şekilde gerçekleştirildiğinden emin olmak için günlük gözleme tabi tutulmuştur. Eğitimci sınıfta uygulanması gereken işbirlikli öğretim stratejilerinin kullanılması hakkında bilgilendirilmiştir. İşbirlikli eğitim tasarımı öğrenciler grup oluşturmak üzere gelişigüzel bir şekilde seçilmişlerdir. Öğretmen adayları eğer grup üyelerinden her hangi biri 60 üzerinde bir puan alırsa, bütün grubun ek bir 5 puan alacağı konusunda bilgilendirilmişlerdir. Her öğrenci de ayrıca bireysel olarak sınavı geçmekten sorumludur.

Oturumlarda 3 çeşit işbirlikli etkinlik kullanılmıştır. Dersin başında öğretmen adaylarına, bu etkinliklere ilişkin kısa bilgi verilmiştir. Etkinliklere ilişkin sorular varsa yanıtlanmıştır. Sınıf dörtlü veya üçlü gruplara ayrılarak etkinliklere hazırlanmıştır.

Sonuçlar işbirlikli eğitimsel tasarım dâhilinde çalışan öğrencilerin sınavın kapalı kitap/tanıma parçasında bireysel olarak çalışanlardan daha yüksek skorlar aldığını göstermektedir (gruplar arasında % 1.15 lik farklılık). Fakat bu farklılık istatistiksel olarak önemli değildir ($p=0.605$). Ek olarak sınav sonuçlarının gösterdiği kadarıyla işbirlikli öğrenme grubundaki öğretmen adaylarından hiçbiri yetersiz not almamıştır. Bu başarının tam tersine klasik olarak eğitilmiş olan öğretmen adaylarının %20'si (8 öğrenci) sınavdan geçme notu alamamıştır. Veri analizlerinin gösterdiği kadarıyla işbirlikli grupta ne kadar çok etkileşim gerçekleşmişse öğrenciler sınavdan o kadar yüksek not almıştır. Faktörlere (etki alanlarına) göre anket sonuçları, her ne kadar farklılıklar önemli olmasa da, hem öğretmen akademik desteğinin hem de öğrenci-öğrenci akademik desteğinin işbirlikli grup tarafından daha pozitif bir şekilde algılandığını göstermektedir. Bununla beraber diğer 3 etki alanı göz önüne alındığında işbirlikli öğrenme uygulanan grubun sonuçlarının bütün bu 3 etki alanında daha yüksek olduğu görülebilir ve farklılıklar önemlidir.

Öğrenci-öğrenci akademik destek açısından, bireysel grup öğrencileri sınıf içi etkileşimi eğitim açısından daha az destekleyici bulurken, işbirlikli etkinliklerin uygulandığı grup sınıf eğitimini ve etkileşimi destekleyici bulmuştur. Diğer bir değişle, bireysel grup öğrencileri arkadaşlarından daha az destek görmüşlerdir. Son olarak, tutarlılık açısından işbirlikli grup işbirlikli gruba doğru önemli bir farkla daha yüksek puanlar almıştır. Sonuç olarak, işbirlikli öğrenme ve öğretmenler tarafından sağlanan akademik desteğin ölçüsü başarı ile pozitif bir korelasyon taşımaktadır. Gelecekteki çalışmalar özellikle öğretmen yetiştirme kontekstlerinde yer aldığı noktada işbirlikli öğrenmenin bütün yönlerini ele almalıdır.