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THE EFFECTS OF COOPERATIVE LEARNING METHODS ON STUDENTS' ACADEMIC ACHIEVEMENTS IN SOCIAL PSYCHOLOGY LESSONS

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ABSTRACT

The purpose of this study was to investigate the effects of Group Investigation (GI) and the Reading-Writing-Presenting (RWP) method in cooperative learning on students' comprehension of social psychology lesson. This research included 107 first-grade students from two classes. For this research, each class was selected to test one teaching method. The first class was selected as the Group Investigation Group (*n*=52), the second was selected as the Reading-Writing-Presenting Group (*n*=55). The data was collected through the Academic Achievement Test. The results obtained from the data show that the Reading-Writing-Presenting method has a more positive effect on increasing students' academic knowledge and achievements in social psychology lesson than the Group Investigation method.

Key Words: Group investigation, Reading-writing-presenting, Social psychology.

INTRODUCTION

Nowadays, student-centered teaching model, method and technique are used. One of the models in contemporary teaching is cooperative learning method. According to Slavin cooperative learning method is one of the most successfully explored instructional strategy in the history of educational research (Slavin, 1996). Cooperative learning method is effective in reducing prejudice among students and meeting the academic and social needs of at-risk students in terms of education (Sudzina, 1993). Cooperative learning method is an activity that increases the students' class participation, academic achievement and motivation toward learning (Polloway, Patton & Serna, 2001.) Cooperative learning method is neither an ordinary nor a group study. Cooperative learning method may be defined as an active education strategy with small groups in order that the students will develop the learning of both themselves and the group members (Abrami, Poulsen, & Chambers, 2004; Johnson, & Johnson, 1999). It contains a certain amount of togetherness of idea and goal. During these studies, the individual indicates an effort that supports the learning of both himself and his companions (Doymuş, Şimşek & Şimşek, 2005; Aksoy & Doymuş, 2011; Doymuş, 2007; Doymuş, Karaçöp & Şimşek, 2010; Fer & Çırık, 2007). In cooperative learning method individuals endeavors to support both their own learning and colleagues to learn (Doymuş, Şimşek & Şimşek, 2005; Aksoy & Doymuş, 2011; Doymuş, 2007;Doymuş, Karaçöp & Şimşek, 2010; Fer & Çırık,2007). Cooperative learning method can be defined as a learning approach that students help learn from each other creating a small mixed groups towards a common

purpose in an academic subject in both classroom and other environments, increased self-confidence and communication skills of individuals, strengthened the power of problem-solving and critical thinking and students participates actively in the process of education (Doymuş, Karaçöp & Şimşek, 2010; Avcıoğlu, 2012; Hwang, Shadiev, Wang & Huang, 2012; Tan, Wen, Jiang, Du & Hu, 2012; Turan, 2012). The academicals foundations of cooperative learning emerged the work of social psychologist, Morton Deutsch, who specialized in the study of social interdependence Deutsch studied the effects of different group structures on the process and outcomes of group efforts in a variety of social and work settings (Tanner, Chatman & Allen,2003). There are two major theoretical perspectives related to cooperative learning-motivation and cognitive. The motivational theories of cooperative learning emphasize the students' incentives to do academic work, while the cognitive theories emphasize the effects of working together. There are two cognitive theories that are directly applied to cooperative learning, the developmental and the elaboration theories. The developmental theories assume that interaction among students around appropriate tasks increases their mastery of critical concepts (Damon, 1984). When students interact with other students, they have to explain and discuss each other's perspectives, which lead to greater understanding of the material to be learned. The struggle to resolve potential conflicts during collaborative activity results in the development of higher levels of understanding (Bukunola & Idowu, 2012). The elaboration theory suggests that one of the most effective means of learning is to explain the material to someone else. Cooperative learning activities enhance elaborative thinking and more frequent giving and receiving of explanations, which has the potential to increase depth of understanding, the quality of reasoning, and the accuracy of long term retention (Johnson, Johnson, & Holubec, 1986).

The implementation of cooperative learning method many methods are used. These methods display diversity depending on the number of students, the social structure of the environment, the physical structure of the class and applied to the subject of the course and course (Maloof & White, 2005; Şimşek et al., 2008). Cooperative learning method has taken place of education activities for a long time. During this process, researchers have developed various methods and practices (McTighe & Lyman, 1988; Jones & Steinbrink, 1991; Almasi, 1995; Gambrell, 1996). The forefronts of these methods are Learning Together, Student Teams, Group Investigation, Let's Ask and Learn Together, Jigsaw, and the method. In this study, the Reading-Writing-Presentation and Group Investigation methods were used.

In RWP method, students are divided into heterogeneous groups that consist of 2-6 members in class taking into account the physical condition of the class where the course is processed, the number of students, and students' academic achievements (Şimşek, 2013). Reading-Writing-Presentation method consists of three stages. In the reading stage, all groups in the class read the topic of course using different sources that each student had brought during one lesson. In the writing stage, groups completed reading stage pass the stage of writing removing all sources. Students in all groups make a report of what they have learned during the class hours. Reports are evaluated by the author. As a result of evaluation the groups of low-grade return to the stage of reading. The groups of high-grade pass the stage of presenting. In the presentation stage groups makes presentations in the classroom about 20 minutes. After the presentation the points that wondering and unclear the relevant subject are discussed (Okur-Akçay, 2012) Group investigation is learning strategy that involves task specialization (Slavin, 1995). In this method, the class is divided into several groups that study in a different phase of a general issue. Group investigation: Expanding cooperative learning. Working in small cooperative groups, students investigate a specific topic. The study issue is then divided into working sections among the members of the groups. Students pair up the information, arrangement, analysis, planning and integrate the data with the students in other groups.. The information collected is then compiled into a whole and presented to the entire class (Sharan & Sharan, 1992).

In the literature, there are hundreds of studies showing that cooperative learning method is more successful than traditional methods in all respects (Yılmaz, 2007; Peterson &Jeffrey, 2004; Aksoy, 2006; Johnson and Johnson, 2005; Ahmad &Mahmood, 2010). However, there are very few studies comparing cooperative methods of their own (Aksoy &Gürbüz, 2013). The purpose of this study was to investigate the effects of GI and RWP on students' comprehension of social psychology lessons. Specifically, the effects of these methods on the students' academic achievement in social psychology lessons are examined. The specific research question

posed is: Are there any significant difference of using the Reading-Writing-Presenting method and Group Investigation methods on student achievements in social psychology lessons?

METHOD

In analyzing the effects of two different teaching methods in different classrooms, it is more convenient to use the quasi-experimental research design. A quasi-experimental design in which participants are not randomly assigned to the groups, instead, there are naturally occurring groups or groups to which participants are assigned for reasons other than randomizing the sample was used in this study. The study utilized ''a pre-test/posttest non-equivalent comparison group design'' (McMillan & Schumacher 2006). Effects of group investigation method and reading-writing-presenting method on social studies prospective teachers' academic achievement were sought. The participants consisted of two different classes of 107 second grade prospective teachers' social studies education department students who were attending social psychology course at Atatürk University in 20012 to 2013 academic year. One of the classes was randomly assigned as group investigation group (n= 55), and the other was randomly assigned as reading-writing-presenting (n= 52). In order to explore the differences between the two groups in their academic achievement in that course, Academic Achievement Test (AAT) was given to both groups as pre-tests at the beginning of the treatment. According to the data related to AAT scores, it was found that there were no significant differences among the participants. Both groups were applied different method to four weeks. Then posttest was performed.

Sample

This is a quasi-experimental study and designed as a Non-Equivalent Groups pre-test, post-test, and comparison group model. The sample of this study consisted of a total of 107 (57 male and 50 famale ; 20 and 25 ages) second grade social studies prospective teachers from different groups enrolled in a social psychology course for the 2012–2013 academic years. One of the treatment groups was the Group Investigation Group (GIG) (n=52), the second group was the Reading-Writing-Presenting Group (RWPG) (n=55). Groups were given prior information about the method. Before the beginning of the treatment, the author gave information about learning objectives, the instruction process, and rules of working in a cooperative group, roles, and assessment strategies.

Instruments

In this study, the Academic Achievement Test (AAT) was used. The AAT consists of 32 multiple-choice questions; each question is worth two points. The reason for using a multiple-choice test as a measurement tool is teacher candidates will take such a test to become a teacher. This test was created by the aouthor. This test was given to students who were not involved in the study but had previously taken the course in which the aforementioned force and motion topics had been taught. With respect to reliability, AAT was administered to a group of 46 students who had taken the social psychology course the year before. The reliability of AAT was found (α= 0.71). Author pointed out that the gains achieved with AAT related to the subjects of force and motion had been high in terms of the measurement.

Procedure

The Reading-Writing-Presenting Implemented

The RWPG students were randomly divided into eleven sub-groups. These groups were contained five students. The reading-writing-presenting method was carried out four weeks to teaching the "social psychology". The RWPG was employed for four weeks to teach social influence and conformity (St1), attitudes (St2), theoretical approaches to attitude change (St3), the process of attitude change (St4), The main features of the modified reading-writing-presenting methods are presented in three phases for each group in 1) in-class reading, 2) in-class writing, and 3) in-class presenting.

In class reading; all groups in the classroom read the topics for 30 minute from the course books or other resources which was included in the module for the week. In class writing; all groups wrote their understanding about what they read for 20 minutes without accessing resources. Writing was done by group pairs. After finishing the writing, the notes written by the groups were evaluated by the author. Groups whose evaluated

outcomes were not good enough sent back to groups for reading stage. After the groups finished reading and writing stages, three groups made presentations about the subject for 20 minutes. Then, after the presentation an argument discussed in the classroom.

The Group Investigation Implemented

The GIG students were randomly divided into two parts (Part I, n=26 students; Part II, n=26 students). The students in these parts were divided into ten sub-groups. Eight groups contained five students. Two groups contained six students. The GIG was employed for four weeks to teach social influence and conformity (St1), attitudes (St2), theoretical approaches to attitude change (St3), the process of attitude change (St4), The main features of the modified GI are presented in three phases for each module (Oh & Shin, 2005). The features are: 1) in-class discussion, 2) out-of-class investigation, and In-class presentation.

In-class discussion: 'students are organized into research groups', 'students get together in their groups for discussion', 'each group sets an inquiry topic within a given unit and makes a plan for investigation', 'during the discussion, group members use their textbooks to identify their own problems, questions, or issues and select a topic to study', and 'the teacher participates in the group discussion and the teacher's roles include encouraging students to select authentic topics that can be addressed in multiple ways'.

In out-of-class investigation: 'each student group carries out its investigation', 'the teacher helps students with their investigations', 'the teacher's roles include presenting sources of information, providing instruments for their study, and assisting students with difficulties', and 'each research group prepares an in-class presentation'.

In-class presentation: Week II: group A in part 1 was the presentation (offer) group while group A in part 2 was the inquiry (grill) group. While group A in part 1 presented the topics of St1, group A in part 2 questioned the group about their presentation and determined their weaknesses. Other students in the classroom also participated in the discussion. Week III: group B in part 2 was the offer group while group B in part 1 was the grill group. While group B in part 2 presented the topics of St2, group B in part 1 questioned the group about their presentation and determined their weaknesses. Other students in the classroom also took part in the discussion. The other grill and offer groups were organized in the same way as week II and week III.

FINDINGS

In order to determine the differences among the two treatment groups, an independent t-test was employed to determine whether a statistically significant mean difference existed between the GIG and RWPG with respect to AAT. There was no statistically significant mean difference two groups before reading-writing-presentation method and group investigation method were applied (t=1,576, p= 0,118) (table 1). The data indicated that there was a significant difference in social psychology between GIG and RWPG after reading-writing-presentation method and group investigation method were applied (t=2,975, p=0,004) (table1). Students in the RWPG scored significantly higher than those in the GIG after the implementation.

Table 1: Independent t-test Analyses of Pre-and Post-Test AAT Scores

Tests	Groups	N	X[a]	SD	t	p
Post test	**GIG**	**52**	**43,6**	**6,643**	**2,975**	**0,004**
	RWPG	**55**	**47,8**	**7,885**		
Pre test	**GIG**	**52**	**34,4**	**6,505**	**1,576**	**0,118**
	RWPG	**55**	**32,2**	**7,181**		

a: maximum score =64

As seen in Table 1, according to the scores of the AAT pre-test, there was no difference between GIG and RWPG (t=1,576; p>.05.). This finding supports the assumption that the groups should be considered equal. However, according to the scores of the post-test, there was a significant difference between GIG and RWPG (t=2,975, p<.05). The results of this analysis show that reading-writing-presentation method is more successful than group investigation method.

CONCLUSIONS

In this section are discussed taking into account the results of the Group Investigation and Reading-Writing-Presentation method s of the cooperative learning model on pre-service social studies teachers' academic achievements of social psychology lesson. Also, the recommendations developed for applicators and researchers included in this section.

When Table 1 is examined, there is no difference between the groups for the AAT pre-test, but according to the scores of the post-test, there is a significant difference between GIG and RWPG. These results demonstrate that the RWP method has a more positive effect on increasing students' academic knowledge and achievements in social psychology lesson than the GI method. The results of the application of this method are consistent with the results of other studies in this area (Aksoy, Doymuş, Karaçöp, Şimşek & Koç 2008; Ainley 2006; Thurston et al., 2010).

The reason RWP method has a more positive effect than GIG method can be explained with writing stage and the use of visuals. The main purpose of reading texts offered to students during reading is to increase the amount of time allocated to the students to think (White & Gustone, 1989). Visually rich, prepared in accordance with the level of student posters or reading texts, to facilitate students' understanding, in the expression of learned information is very useful and convenient. The second stage RWP method is the writing stage. Writing is very important for the students learned to organize better, to understand and express (Hohenshell & Hand, 2006; Mason & Boscolo, 2000). The implementation phase of the third stage of the method of RWP students aims to learn by doing (Goltz, Hietapelto, Reinsch & Tyrell, 2008; Thompson & Chapman, 2004).

It is know that the achievement effects of cooperative learning more than the conventional lecture method (Gillies, 2006; Hennessy & Evans, 2006; Johnson, Johnson & Stanne, 2000; Bukunola & Idowu, 2012; Şimşek, 2012). In this study was made the comparison of two different cooperative methods. It is important for the literature the comparison of the methods of cooperative learning model with each other and other active learning methods. Therefore in this study was made the comparison of two different cooperative methods. In light of the data obtained from this study, three specific recommendations are drawn:

1.The comparison other methods of cooperative learning model should be made.
2.Similar studies can be done at all grades.
3.The methods of cooperative learning can be compared to other active methods.

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