

The Effect of Collective Learning Method on Student Achievement in Turkish Education History Course

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Abstract

The purpose of this study is to search the effect of collective learning –being within cooperative learning model- on the academic success of students in the Turkish Education History course being taught in the School Teaching program of a education faculty at public school in Turkey. The class teacher candidates have been divided to test and control groups. 26 individuals have consisted the test group, and 26 has consisted the control group. The achievement test has been applied as pretest and posttest to these groups. Collective learning method has been applied on the test group, and teacher centered teaching method has been applied on the control group. As the data has not shown normal distribution, Mann Whitney U test –among non-parametric tests- has been applied. According to the results of this test, no meaningful differentiation could be found in between the test group and control group.

Key words: Cooperative teaching model, collective learning method, teacher centered teaching.

Introduction

In a fast developing society, keeping pace with the changes may be ensured the education that the individual will get from the society s/he lives in. Erturk (1974) addresses education as requested and permanent change in the behaviors of the individual. Sonmez (2012) speaks of becoming a knowledge-based and industrial society, planning the education system in a manner that will be able to realize this objective and continuously assessing it in order for our country to pass on to contemporary civilization level and to reach to more advanced levels. For this reason, upon the changes in teaching programs in years 1924, 1926, 1936, 1948, 1962, 1968 and 1998 (Celenk, Tertemiz ve Kalayci, 2000), a new teaching program has been prepared in 2004 that adopts constructivist approach (Perkins, 1999) whose essence is configuration and implementation of information by the learner. The newly adopted program had been introduced in the academic years of 2005-2006 (Gomleksiz and Bulut, 2007). The constructivist learning environments are being arranged in a manner in which the learners will be able to interact more with their surrounding and will be able to have rich learning lives (Bas, 2012). Akbulut (2013) mentions that learning arises more in social environments and through mutual interaction. While the effective and mutual interaction of the learners with their surrounding is structuring learning, it enables them to act together and to benefit from the pre-learning of each other. This condition enables the information to arise as a product that is collectively structured by the learners. This learning process, that is realized by setting the learners to work together, necessitates the learning environment -to be formed for the learner- to be convenient for cooperation.

Learning based on cooperation is a teaching method in which a group –which consists of small groups- is assessed by different rewarding manners (Slavin, 1988; Gomleksiz, 1997), that improves the thinking skills of the students (Doymus, 2008) and that enables them to respect the ideas arising within the group while realizing that (Nelson, 1992), that increases motivation in learning process (Ozer, 2005), that maximizes the learning of each student within the group (Johnson, Johnson, Holubec, 1993; McHale, 2002), in which the learner is active (Lin, 2006; Bilgin, 2006). As cooperative learning is student centered and skill focused (Cooper and Mueck, 1990), the purpose of increasing the effectiveness of learning of the students (Guvenc, 2011) and making each member of the group stronger (Bay and Bayram, 2012) has caused this method to house many sub techniques. Cooperative learning model has many sub methods and techniques such as Collective Learning, Dividing-Combining, Student Teams–Success Sections, Team-Game-Tournament, Academic Conflict, Group Research,

Cooperation-Cooperation, Collective Asking-Collective Learning (Yildirim, Er-Nas, Ayas, 2009). Collective learning method is the most known form of cooperative learning model (Simsek, 2007). Bayrakceken et al. (2011) list the implementation process of collective learning method as follows: Collective learning method starts by the formation of a heterogeneous group consisting of students who have different academic and social skills. Then follows the selection of a chief by the members of the group and naming the group, assigning a subject or unit to the group formed, studying of the subject or unit collectively by the students both within the class and outside the class, preparation and submission of study report, and individual and group assessment. Having a purpose, sharing of thoughts and materials, division of labor and having a group award by the end of the process are the most important features of this method that bears the general features of cooperative learning model (Kardas, 2013). Ergun (2006) mentions the requirements of understanding of the material by each student, establishing links in between old and new information, criticizing the thought instead of people, not changing the thoughts unless they are illogical, participation of each member of the group in the answer and listening each member in the implementation process of this method.

It can be said that collective learning method houses features that will positively affect academic success in the learning process. By the studies performed by Varank and Kuzucuoglu (2007), Akcay (2014), Kagan and Kagan (2009), Kardas (2013), Simsek (2007), it is being seen that they have concluded that collective learning method increases academic success and that it is more successful than traditional learning method.

Method

The research had been applied on the last grade students of Faculty of Education Department of School Teaching in the spring term of the 2015-2016 academic year. The total number of students participating in the sample had been 52. The effect of collective learning method on academic success in teaching of Turkish Education History course had been examined. 26 of the 4th grade students had consisted the test group, and 26 of them had consisted the test group. Collective learning technique -being within cooperative learning method- had been applied on the test group. And teacher centered traditional learning method had been applied on the control group.

Design of Research

Quasi-experimental pretest-posttest design has been used in the research. In this model, the research is being performed on groups previously formed for specific purposes. This model shows us that the previously formed groups are addressed as they are, but a part of them is assigned as test group and a part as control group through chance, and that the groups are measured before and after the experiment (Kaptan, 1998).

Collective Learning Method

The subjects of the units of Turkish Education History course are distributed to each of the members of test group, and the responsibility of collective learning is imposed on each member. The importance of collective learning and its importance for the success of group are taught. For three week period, the students of the test group first started to learn the subjects assigned to them and then they started to teach the subjects they had learned to their colleagues within the group. An additional period of one week is provided to the students. And in the following weeks, each group presented its own subjects in the class environment which is the larger group. Different perspectives are developed by realizing the discussion of subjects through mutual questions and answers.

Considering the scores gotten as the result of pretest of collective learning method, heterogeneous groups of 5 are formed. According to the scores gotten from the achievement test, the groups are formed as per highest, middle, low, weak and very weak scores. The subjects of Education History are divided to units and distributed to the students. It is enabled for the students in each group to first prepare and learn their own subjects. And then each student started to teach the subject s/he has learned to her/his colleagues in the group, and in the first week the students told their own subjects to each other. And then each group presented their subjects to the class which is the larger group. Mutual discussions are realized. Questions and answers are provided. The groups making the presentation are also supported by the guiding teacher.

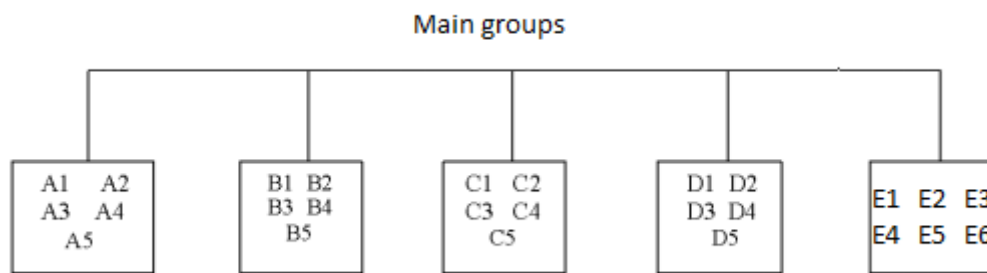


Figure 1. Collective learning groups

Current Learning Method

Teacher centered instructional technique is applied in the control group. The planning and presentation of the course is performed by the lecturer. Power point presentations, movies and documentaries are provided. Examples are given, and discussions are made through questions and answers. By this way, it is ensured for the subjects to be better understood. Textbook and study aids are used as the source of course. Titles and sub titles are written on the board, and it is tried to draw attention. The subjects that are deemed important along the course are pointed out. After addressing each subject, questions are asked on the subject, and the points that are not understood are explained again. Moreover, feedbacks are given by giving short home works to the students. Some sections are made to be read by the students, and the course is taught by asking them to provide comments on the subject.

Subject Content Analysis

Subjects of Turkish Education History consist of three main sections. Education among Turks before Islam, education among Turks during Islam, and education among Turks in the period of republic. The common features of education among Huns, Gokturks and Uighurs –in the period before Islam-are revealed. Whether the old Turks had interaction with other cultures, the means of education they had used, and whether they knew printing or not are addressed. The educational institutions and the institutions of formal and non-formal education during the periods of Karakhanids, Seljuks and Ottomans are revealed. The role of madrasahs in raising the Turkish people as formal education institutions is emphasized. The place of Al-Farabi, Avicenna, Yusuf Khass Hajib, Mahmud al-Khasgari, Khoja Akhmet Yassawi and Edip Ahmed –among the significant educators of the period- in the Turkish education history is addressed.

The place and importance of Seljuks in the Renaissance of 12th century is revealed. The importance attached to education and science by Nizam al-Mulk and old Turkish emperors is addressed.

Basic features of education in Ottomans as from its establishment until innovation period, and the significant educational institutions of the Mehmed the Conqueror and Suleiman the Magnificent are emphasized. The place of primary education, ottoman elementary school, palace educational institutions, military training, public education and foundations in Ottomans are addressed in respect of Turkish education. Military and civil schools in innovation period and how the obligation of primary education developed are addressed. Education and its features, and comprehensions of training teachers in Tanzimat reform era are revealed. Education and its features in the 1st constitutional monarchy period and autocracy period, the ottoman basic law of 1876, obligation of primary education, efforts of training teachers are addressed. 2nd constitutional monarchy period and its features, and the incidents of education in the period are emphasized. It is dwelled on the features of education in republic period, law on unification of education, purposes and principles of republic period, place of Atatürk in the history of education, improvements in primary, secondary and higher education. And it is also dwelled on village institutes, teacher training and its policies, education comprehensions of significant educators, national education councils, and program development efforts. Consequently, a general assessment of Turkish education history is made. The results that can be obtained are assessed.

Data Collection Tool

Turkish Education History Achievement Test (TEHAT) is formed by 31 multiple choice questions each having 5 choices. The measurement tool is formed by 25 multiple choice questions. All the questions are formed at a knowledge and comprehension level that would cover all the subjects of Turkish Education History. The alpha value of TEHAT is found as 0.875 as the result of posttest. The opinions of specialists of Educational Sciences are also considered for the validity and reliability of the test.

In this research, TEHAT is used as both pretest and posttest. It is considered whether arithmetical averages of test group and control group were different or not in respect of pretest and posttest. Turkish Education History course is taught for a term. Posttest is applied, and it is considered whether there exists a difference in between test group and control group in respect of collective learning and traditional learning. And in case of difference, it is tried to reveal in favor of which teaching technique it was. The obtained data is analyzed by using SPSS 20.0. As the data didn't show normal distribution, Mann Whitney U test –among non-parametric tests- is applied. Mann Whitney U test is the alternative of t test being used in non-parametric analyses, and it allows determining whether the distribution of measurements of two independent samples show significant difference or not just like the t test. And in the data analysis type, alpha significance level is taken as .05.

Findings

The posttest data obtained by using Turkish Education History Achievement Test (TEHAT) –which is applied on test group and control group that are formed as per collective learning technique and teacher centered teaching method- has been analyzed by Mann Withney U test.

Table 1. *Results of normality test*

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total	,122	56	,036	,929	56	,003

As the data does not show normal distribution, Mann Withney U test –among non-parametric tests- has been applied.

Table 2. *Results of Mann Whitney U Test as per the pretest scores of test group and control group*

Groups	N	Serial Average	Serial Total	U	P
Test	26	26.92	700.00	327.000	0.839
Control	26	26.08	678.00		
P<0.05					

In the pretest study on test group and control group, statistically significant difference has not been seen among the methods applied (p>0.05).

Table 3. *Results of Mann Whitney U Test as per the posttest scores of test group and control group*

Groups	N	Serial Average	Serial Total	U	P
Test	26	25.77	670.00	319.00	0.727
Control	26	27.23	708.00		
P<0.05					

In the study pretest group and control group, statistically significant difference has not been observed between two groups' achievement scores (p>0.05). The reason of this may be related to the facts that the last year students are getting prepared for their own professional exams (central exam after the graduation) rather than the courses, that they are spending a significant part of their time outside the faculty, and that they don't allocate sufficient time in order to come together within and outside the faculty.

Result and Discussion

In this study, it has been intended to search the effect of collective learning method – being within the cooperative learning model- on the academic success of the class teacher candidates. The implementation is realized at Turkish Education History course in the spring term of 2016. Test group and control group are formed. Turkish Education History Achievement Test (TEHAT) is applied as pretest and posttest on these groups, and consequently no significant difference is found in between the groups (Table 3).

According to the obtained results, no difference in between collective learning method and teacher centered teaching method has been found in the practice in Turkish Education History course. While there are researchers in literature that are in favor of collective learning method which is within the cooperative learning model, and while this method is coming to the forefront in increasing the quality of education, in this study no difference could be found in between that and teacher centered teaching method (Yildiz, 1999). It coincides with the result of Varank and Kuzucuoglu (2007) regarding that the use of collective learning method in teaching of mathematics is not superior to traditional teacher centered teaching method.

And similar results had also been found by similar studies performed before (Atici and Gurol, 2002; Bilgin and Akbayir, 2002; Ocal, 1996).

When cooperative learning model is applied on students of any age group, it is being seen that it plays a significant role in increasing the success of the students (Artut and Tarim, 2004; Doymus et al., 2005; Kilic, 2008). In the practices of cooperative learning model, it is being effective in increasing the communication skills of the students (Kagan and Kagan, 2009). Having no difference in between collective teaching and teacher centered teaching method in this study also indicates that cooperation is not ensured sufficiently among the students. This fact that last grade teacher candidates are getting prepared for the professional exams (public personnel selection examination) rather than their courses, and that they spend most of their time in various courses outside the faculty may have given rise to this result.

Avcioglu (2003) specifies that cooperative learning model is more effective on learning skills and social communication of students. Artut and Tarim (2004) have addressed the effect of cooperative learning on the success of students. A teacher should know the methods and techniques conforming to the cognitive structure of the students in order to realize a learning that is not rote learning (Onen, 2005; Yilmaz and Colak, 2011). The performance of practices by the teachers that conform to these methods will increase the success of the students.

As the result of this study, no difference has been found by pretest and posttest implementation in Turkish Education History course. Along with this result, it can be said that external factors are effective in not obtaining more effective and positive results on the teacher candidates through the collective learning method. These external factors may be presented as attendance of teacher candidates to courses outside of faculty etc. In effective implementation of cooperative learning, guiding and directing the teacher candidates may enable the success of this method (Acikgoz, 1992). But the most extensively used teaching method at schools is the classic plain narration method. The teachers are not extensively using teaching methods based on group study. In this study, lack of provision of sufficient and effective information to the teacher candidates regarding what the cooperative learning is, and lack of having implementation examples may also have given rise to this result.

The selection of the group members by the lecturer is able to gather students who cannot get along with each other, who don't want to study together or who have personal problems. Consequently, this condition is able to decrease the efficiency and motivation of group (Bahar, 2002). And in this research, selection of group members by the class teacher may be indicates as the cause of not having any change in the success of the students through cooperative learning method. But when the results of this study are assessed mathematically, it will be seen that success averages of the students studying through cooperative learning method is higher than the success averages of students studying through classic plain narration method. And this indicates that even if cooperative learning method is not a superior method in respect of statistical results, it may be considered as a preferable teaching method when compared with classic plain narration method.

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