EXTENDED SUMMARY

The aim of this study is to determine the effect of cooperative learning, cooperative student teams-achievement divisions, teacher-centered method on academic achievement science courses. The sample of this study consists of 316 students studying at six secondary schools in Kars. In the present research, as data collection tool, Preliminary Achievement Test, Academic Achievement Test and Opinionnaire for students were used. In order to assess prior knowledge of students in science and technology course studying in 6th, 7th and 8th grades of primary school, three different tests were prepared (preliminary achievement test for sixth, seventh and eighth graders). To determine reliability of the test, each test was conducted on the students in the same level. By omitting the useless questions at the end of the test, the number was limited 25 for sixth and seventh graders and 20 for eight graders. SPSS program was used to calculate reliability of the tests. Cronbach Alpha Coefficient was 0.77, 0.63, 0.65 for sixth, seventh and eighth grades respectively.

Three different tests were prepared to assess the academic achievement levels of 6, 7 and eight grade students in science and technology course. The test consists of 30 multiple-choice questions on matter and heat for sixth grade, 30 questions on structure and features of matter for seventh grade and 25 on states of matter and heat for eight grade. Determination of achievement test was done according to KR20 and reliability coefficient was found 0.88 for sixth grade, 0.75 for seventh grade and 0.69 for eight grade.

The survey was conducted on three different groups at all levels (6th, 7th and 8th). In the first group, cooperative learning method was employed; in the second group student-team achievement division method while in the third teacher-centered learning method was used. The data obtained were analyzed through descriptive statistics and one-way ANOVA. The results of the study showed that the effects of Cooperative learning and Student Teams-Achievement Division method on students’ academic achievements were found similar and that these students were more successful than those taught by means of teacher-centered method.

The sixth grade students within the research declared positive opinions about cooperative learning method. The students in 7th and 8th grade, who were conducted cooperative learning method gave affirmative views as well as negative opinions. For example, they gave partially negative answers to the questions "Would you work in pairs or groups in cooperative learning?" and "How was your performance in cooperative learning compared to your friends?". The reason would be that some members of the group did not fulfill his own responsibility, come together in the tasks outside the group and that teacher and researchers were not interested enough in student groups and the time lacked.