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This study aimed at investigating the effect of the cooperative learning method on eighth grade student's academic achievement and attitudes toward learning science versus the effect of using the traditional method in teaching Science.

The study sample consisted of 124 eighth grade male and female students selected from United Nations Relief and Work Agency for Palestine Refugees (UNRWA) schools in the Jerusalem area during the scholastic year1997-1998.

The sample was distributed between two schools: Ramallah Girls School, and Ama'ri Boys School, with two sections in each school. One was the experimental and the other as the control group randomly selected. Two science teachers, one male and one female, taught the two sections in their respective schools. The study instruments that were used: achievement test, attitude scale,

and worksheets that were designed for cooperative learning. The reliability of the first two instruments was: 0.80. The study had 9 hypotheses.

Two - way analysis of variance (ANOVA) was used to examine the effects of the treatment. The results showed that:-

- Academic achievement was significantly higher in the

experimental group.

- Students in the experimental group scored significantly higher than students in the control group in the advanced cognitive level skills. Gender differences were not found to be significant.

- Students in the experimental group scored significantly higher on the attitude scale than the control group students. Females also scored significantly higher than their counter parts on attitude scales.

-There were no significant differences because of the interaction between method and sex in achievement and attitude toward science.

Based on the results of this study, it is recommended that science teachers be encouraged to adopt cooperative learning method for its effectiveness in improving students' academic achievement and attitude toward science.