

Research Studies on Effect of Cooperative Learning on Social Relations

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Abstract: Cooperative learning is an educational approach which aims to organize classroom activities into academic and social learning experiences. Cooperative learning requires students to engage in group activities that increase learning and adds other important dimensions. The first and most important element is Positive Interdependence. The second element is individual and group accountability. The third element is (face to face) promotive interaction. The fourth element is teaching the students the required interpersonal and small group skills. The fifth element is group processing. Research on cooperative learning demonstrated “overwhelmingly positive” results and confirmed that cooperative modes are cross-curricular. The positive outcomes include academic gains, improved race relations and increased personal and social development. This paper focuses on the studies which have been conducted by various researchers which showed the effectiveness of cooperative learning on social relations.

I. INTRODUCTION

Cooperative learning is an educational approach which aims to organize classroom activities into academic and social learning experiences. There is much more to Cooperative Learning than merely arranging students into groups, and it has been described as "structuring positive interdependence". Students must work in groups to complete tasks collectively toward academic goals. Unlike individual learning, which can be competitive in nature, students learning cooperatively can capitalize on one another's resources and skills (asking one another for information, evaluating one another's ideas, monitoring one another's work, etc.).^{[3][4]} Furthermore, the teacher's role changes from giving information to facilitating students' learning.^{[5][6]} Everyone succeeds when the group succeeds. Ross and Smyth (1995) describe successful cooperative learning tasks as intellectually demanding, creative, open-ended, and involve higher order thinking tasks. Five essential elements are identified for the successful incorporation of cooperative learning in the classroom.

In order for student achievement to improve considerably, two characteristics must be present. 1. While designing cooperative learning tasks and reward structures, individual responsibility and accountability must be identified. Individuals must know exactly what their responsibilities are and that they are accountable to the group in order to reach their goal. 2. All group members must be involved in order for the group to complete the task. In order for this to occur each member must have a task that they are responsible for which cannot be completed by any other group member.

II. TECHNIQUES OF COOPERATIVE LEARNING

There are a great number of cooperative learning techniques available. Some cooperative learning techniques utilize student pairing, while others utilize small groups of four or five students Think Pair Share Jigsaw Jigsaw II Reverse Jigsaw Learning Together. Reciprocal Teaching STAD (or Student-Teams-Achievement Divisions) are some of the techniques of cooperative learning.

III. RESEARCH EVIDENCES ON COOPERATIVE LEARNING

Research on cooperative learning demonstrated “overwhelmingly positive” results and confirmed that cooperative modes are cross-curricular. Students who fully participate in group activities, exhibit collaborative behaviors, provide constructive feedback, and cooperate with their groups have a higher likelihood of receiving higher test scores and course grades at the end of the session. Cooperative learning is an active pedagogy that fosters higher academic achievement. The positive outcomes include academic gains, improved race and social relations and increased personal and social development. Cooperative learning has also been found to increase attendance, time on task, enjoyment of school and classes, motivation, and independence. Here attempt has been made to present the research studies conducted by various researchers on effect of cooperative learning on social relations.

IV. STUDIES RELATED TO COOPERATIVE LEARNING AND SOCIAL RELATIONS

Hansell, Tackaberry and Slavin (1984) investigated the effects of cooperative and competitive experiences on the structure of student peer groups. Subjects were 117 4th, 5th and 6th graders in 7 classrooms. Classes were randomly assigned to cooperative group learning, competitive group learning or control learning treatments for a 6 week programme. Results supported the hypothesis that competitive group experience would increase weak dyadic relationships and enlarge preexisting peer groups structures, but findings failed to support the hypothesis that cooperative group experience would increase strong dyadic relationships and break down pre existing peer groups.

Johnson and Johnson (1984) submitted the responses to a classroom climate instrument, made by 859 5th-9th graders from 3 urban and sub-urban mid-western school districts to correlational analysis of relationships between scales measuring attitude toward social interdependence and

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attitude toward relationships with peers and teachers. Students who participated frequently in cooperative learning experiences were compared with those who had only infrequently experienced cooperative learning. Cooperativeness and frequently participating in cooperative learning situations were positively related to perceptions of support, help, and friendship from teachers and peers.

Hansell (1985) investigated the strength of ties between the students of different races and sexes and tested a cooperative group intervention designed to increase weak ties between naturally occurring peer groups. Sample consisted of 5th and 6th graders from an inner city school, included 53% white, 47% black, 56% male, and 44% female. There were 117 students in control classroom and 200 students were in experimental classroom. All classes studied a 10-week language mechanics curriculum on grammar, punctuation, and English usage. The treatment was composed of an interdependent cooperative task structure and a cooperative reward structure that enabled the students to learn about each other as individuals. Results supported several hypothesis derived from the theory of strength of weak ties. Friendships between races and sexes tended to be weak rather than strong, and ties between peer groups also tended to be weak. The cooperative group intervention stimulated new weak ties between students of different race and sex. However, these did not form a bridge between groups, but instead were concentrated within existing peer groups. Findings confirm that cooperative groups stimulate new weak ties between individuals of different race and sex but raise doubts whether this intervention directly improves intergroup relations among preexisting peer groups.

Anderson (1985) conducted a study to investigate the relationship between cooperative group tasks and students' subsequent cooperation and peer acceptance levels. Sample consisted of 28 10-15 years old learning disabled males who performed cooperative group-learning tasks which were administered in 17-30 minutes sessions. 5 characteristics were used to compare students' pre and posttask cooperation and peer acceptance were severity of disability, IQ, socio-economic status level, explosiveness, and motivation. Students' peer acceptance was measured with a sociogram, while their cooperation was measured by a forced-choice cards task. Results indicated that over all improvement in students cooperation and peer acceptance. However, analysis of high and low scores, in addition to factors of severity of disability, socio-economic status level, and high motivation, did not reveal any pre to posttask differences. Students who were more explosive showed less cooperation than less explosive students. IQ was shown to have a significant effect on students' cooperation and peer acceptance.

Johnson and Johnson (1985) tested whether non handicapped students would reject or dislike lower-achieving handicapped peers with whom they collaborated by assigning 36 non handicapped and 12 handicapped 4th graders to cooperative or individualistic learning conditions for 55 minutes/day for 15 instructional days. Results indicated that cooperative learning experiences promoted higher achievement and greater interpersonal attraction between handicapped and non- handicapped students, as well as more cross handicap

interaction focussed on supporting and regulating efforts to learn and to ensure involvement of all students in the learning tasks.

Johnson, Johnson, Scott and Ramolae (1985) conducted a study to compare the effects of single-sex cooperative, mixed-sex cooperative, and individualistic learning situations to determine whether they promote systematic differences in relationships between male and female students and handicapped and non handicapped students and achievement and attitude towards science of male and female students. Sample consisting of 154 5th and 6th grade students (76 5th and 78 6th) from a large elementary school in an upper middle class sub-urban area of large mid-western city. 76 females and 78 males, 26 learning disabled and 128 non-handicapped students were from the five multigrade classrooms. Students were assigned to condition stratifying for ability, sex, grade, level, homerooms and handicap. Sixty students were assigned to the mixed-sex cooperative condition, 64 students were assigned to single-sex condition and 30 students were assigned to the individualistic condition. The independent variables were cooperative versus individualistic learning situations, single-sex versus mixed-sex cooperative groups, and handicapped versus non-handicapped students. Dependent variables included achievement, attitudes and relationships. The tools used were, an achievement test consisted of 37 multiple-choice items. A number of attitude scales were used in this study. They were Cooperation scale, Individualistic scale, Competition scale, Personal academic success and Self-esteem scale, Peer academic support scale, Cohesion scale and Conflict scale and Guess who measure and Scientific attitude scales consisted of a ten-item scale on perception of science as a male domain, a six-item scale on liking for studying science, a nine-item scale on perceived utility of science in life and career and a nine-item scale on confidence in one's science ability. ANOVA was conducted to test for main effects and interaction among condition and handicapped status. On the basis of significant multivariate analysis, a 3x2 ANOVA was used to analyze differences between the three conditions and the handicapped and non-handicapped students. The instructional session lasted 45 minutes a day for 21 days spread over 9 weeks. The results indicated that cooperative learning situation, compared with individualistic ones, promoted more positive sex and cross handicapped relationships. Males achieved higher and had more positive attitude toward science than did females.

Warring, Johnson, Maruyama and Johnson (1985) hypothesized that effects of cooperative experiences on cross-ethnic and cross-sex relationships would be strongest for structured class activities, next strongest for unstructured class activities in the broader school environment; and least strongest for activities in students' homes. In study I, sample consisted of 74 6th graders and were randomly assigned to three conditions i.e., cooperative controversy, cooperative debate, and individualistic; stratifying for sex, ability level and ethnic membership. Students participated in the study for 55 minutes/day for 11 instructional days. In study II, sample consisted of 51 4th graders and were randomly assigned to two conditions i.e., intergroup cooperation and intergroup competition; stratifying for sex, ability, and

ethnic membership. Students participated in the study for 55 minutes/day for 10 instructional days. An activity report scale was administered to students to determine with whom they interacted in structural class activities, unstructured class activities, school activities outside of class, and activities in the home. Results showed that, in study 1, both cooperative controversy and cooperative debate conditions promoted more positive cross-sex and cross-ethnic relationships than did individualistic learning. In study II, intergroup cooperation promoted more positive cross-sex and cross-ethnic relationships than intergroup competition. Johnson and Johnson (1986) compared the cooperative and individualistic learning experiences, effects on interaction and relationships between non-hearing-impaired (NHI) and hearing-impaired (HI). Subjects for the study were 20 NHI and 10 HI 3rd graders and were assigned to cooperative and individualistic learning conditions on a stratified, random basis controlling for handicap, sex and ability level. Treatment was lasted for 15 instructional days and students participated for 55 minutes/day during the treatment period. Students completed measures of achievement, interpersonal attraction, instructional interaction, attitude and perspective taking. Results indicated that students involved in the cooperative learning experiences performed higher on measures of interaction and interpersonal attraction between NHI and HI students than did the students involved in individualistic learning experiences. NHI students who worked cooperatively with HI peers were more accurate in taking the perspective of their HI classmates than were NHI students in the individualistic condition. Result supported the use of cooperative learning procedure in mainstreamed classrooms.

Farivar (1986) conducted an exploratory study that describes a cooperative class and a quasi experimental study that compares the cooperative class with a traditional one. The sample consisted of single III and IV grade class of 57 students and three teachers. The dependent variables were social relationships, student attitudes, achievement, intellectual academic success attribution and classroom climate. Analysis of variance and cross tabulation was used to determine whether differences existed between the 2 classes on the dependent variables to be measured. Analysis of variance also was used to examine the performance of the students in the cooperative class on tasks requiring cooperative skills and behaviours. Results of the study revealed that a) students in the cooperative class had more positive feelings toward classmates than did students in the traditional class, b) students like to work cooperatively, they dislike working competitively, students in the cooperative class felt positively about working with students 'smarter' than them and disliked working with students less smarter. Cooperation increased productivity and interpersonal relationships. They disliked lack of group skills, off task behaviour and negative social behaviour. There was no significant difference between the 2 classes on achievement. Students in the cooperative class had a significantly higher score in the measure of locus control. There was high statistically significant difference between the two classes on all six sub-scales of the classroom climate measure. Cooperative behaviour increased over time with performance on cooperative tasks.

Nederhood (1986) conducted a study which analyzes the effects of 34 teachers' use of Student Team Learning, a cooperative learning technique, on achievement and attitude outcomes of 7th grade students. Data was collected in the 114 middle school classroom from 5 schools and 1145 students. A training in Student Team Learning technique is given for five experimental teaching teams for equivalent of 2 and ½ days and six control teacher teams were asked to continue their normal teaching patterns. All teachers used the same content materials. Measures of effect include California Achievement Test raw scores for the mathematics, reading, language arts, and total batteries; student survey responses to eighteen questions assessing the level of student involvement in school, the level of student attachment to school, the number and strength of student friendships, and students' self perceptions, student grades in mathematics and language arts; a follow up survey of students of high-implementing teachers collected in the spring of 1983. The levels of teachers implementation were established from six random observations of each teacher's classroom. Data was analyzed at the teacher level using t-tests and regression analysis. This study found significant positive results linking a teacher's use of Student Team Learning with positive classroom involvement, increased number of friends, higher academic expectations, and increased self confidence. No significant differences were found for academic achievement measures or for a measure of improved race relations.

Miller (1990) in an analysis of three studies, cooperative learning strategies were shown to increase the chance that mainstreamed children would be accepted by classmates and positive gains in academic performance. The three studies each compared cooperative and competitive teaching strategies. In each case, handicapped children in cooperative learning groups increased friendships and outperformed peers than in competitive classrooms.

Martinez (1990) investigated the relationship between cooperative learning and bilingual third grade student scores on achievement test and self esteem scale. Method included a cooperative learning strategy that used small group dynamics as a way to teach social skills for III grade bilingual students in a predominantly Hispanic elementary school. The study lasted for 10 months, and the results were compared to a traditional lecture, drill, test method in other bilingual classes. It was hypothesized that the increased talking and interaction necessary for small group dynamics would increase language and cognitive levels. This increase was measured by California Achievement Test. The second hypothesis is related to self concept. The cooperative learning group spent sometime everyday processing or talking about how they interacted socially. This emphasis on social skills was expected to raise self concept as measured on the Piers-Harris Self-Concept Scale. A sociogram was given to measure the number of students chosen with whom to work and play. The results confirmed that cooperative learning did extend the number of both same and different sex students chosen. The self concept scale measured both classes as growing in self-concept but results were not statistically significantly different. Differences between the control and experimental classes on the nine subsets of the California Achievement Test were not statistically significant but did show a positive trend when means were compared.

Joyce (1991) evaluated the sex differences in interaction and achievement and the impact of group rewards on high-level elaboration responses within mixed-sex cooperative small groups at the high school level. Students' attitudes were evaluated to determine if cooperative learning strategies encouraged use of Control Theory in classroom. The sample consisted of 64 students i.e., 30 males and 34 females, from 10th, 11th and 12th grades geometry classes at a secondary high school located in north-eastern Massachusetts. This study examined the effects of cooperative learning on a) interaction and achievements of students, b) dynamics of interaction among females and males in different group compositions, c) achievement in each group composition, d) impact of group rewards given experimental and control groups, and e) student attitude that have been linked to control theory. The Comprehensive Test of Basic Skills CTBS/4 was used to establish the group compositions. Teacher made achievement tests, students' interactive behaviours that were audio recorded, scripted and coded, and the results of pretest/posttest administration of the Control Theory Student Attitude Inventory (CTSAI) provided the data used in the analysis and evaluation. The statistical procedures used were descriptive statistics, including two-factor analysis of variance (ANOVA), analysis of covariance (ANCOVA), t-tests for independent samples and t-tests for correlated groups. Results revealed that a) females and males demonstrated increased achievement, b) males scored slightly higher than females on achievement measures given similar ability, c) males received more help than females, d) male provided more help to male than to females, e) females provided more help than males regardless of the sex of the helpee, f) group rewards increased the use of high-level elaboration responses but, did not reach significance, $P < .05$, g) an increase in high level responses predicted an increase in achievement, and h) student attitudes shifted toward significance concerning power, inclusion, freedom and fun in the cooperative learning classroom. It is concluded that cooperative learning was an effective teaching strategy to; increase achievement, encourage student interaction beneficial to achievement, and encourage change in students' attitudes toward classroom processes.

Smith, Boulton and Cowie (1993) compared the impact of cooperative group work (CGW) on ethnic relations by evaluating mainly White and Asian, as well as Afro-caribbean, children (aged 8 and 9 years) in three middle schools in U.K. One of two classes in each of the 3 schools experienced an enhanced CGW curriculum, while the other experienced the normal curriculum (NC). Results were similar in each schools. After the intervention, students who had experienced CGW liked each other more, irrespective of race and gender, and gave more positive behavioural nominations to other race students. There were some increased cross race preference choices from test assignments. There were also some reductions in negative stereotypes of other ethnic groups. These were not found in NC students.

Jones (1995) analyzed the effects of cooperative learning on students behaviour, attendance, and cross ethnic relationships. 163 ninth grade American History students and 153 tenth grade World History students participated in

the experiment. Independent variables consisted of Learning Together cooperative learning method and the traditional learning method. Three dependent variables used were student behaviour, attendance, and cross ethnic relationships. Behaviour and attendance were measured by disciplinary referrals and absences respectively. Cross-ethnic relationships were measured twice; a) Classroom Life Measure instrument questions regarding cooperative learning, class cohesion, and alienation, and b) a sociometric questionnaire. Four multivariate analysis of variance were performed. Gender and race were analyzed to control possible effects. Result showed that a) student behaviour was not significantly affected by method in American History classes; findings were significant for method in World History classes; b) attendance was not significantly affected by method in American History classes; however, an interaction effect did occur between gender and race in World History classes; c) cross ethnic relationships, as measured by 2 sociometric questions, were significantly affected by method in American History classes. Question one findings were significant in all World History classes when controlling for gender. Males had more opposite race friends than females. Question two findings were significant for method in World History classes; findings were also significant when controlling for gender. Males spent more time with opposite race friends after school or on weekends than females. Cross-ethnic relationships, as measured by cooperation on the Classroom Life Measure instrument, were significantly affected by method in American History classes. An interaction effect between gender and method also occurred. Findings were not significant for method in World History classes. Cross-ethnic relationships, as measured by class cohesion and alienation, were not significant for method in American History or World History classes.

Stevens and Slavin (1995) investigated the effects of cooperative learning model on students' achievement, attitudes and social relations. The sample for the study consisted of 1,012 students in second through six graders in five elementary schools of a suburban Maryland school district. Twenty-one classes in the two treatment schools were matched with 24 classes in the three comparison schools on mean California Achievement Test scores for Total Reading, Total Language, and Total Mathematics. Ethnic and socio economic background of the students was controlled by selecting comparison schools from the same or similar neighborhoods. The student populations of each school ranged from 4% to 15% minority students ($M = 7.3\%$), and from 2% to 20% ($M = 10.2\%$) disadvantaged students. The schools were all located in predominantly working-class neighborhoods. Approximately 9.3% of the five schools' student populations were identified as learning disabled, ranging from 7% to 12% in each school. The tools used for the study included California Achievement Test, Form C, related to Total Reading, Total Language and Total Mathematics and was administered as pre test in the fall of the first year of the study and subsets of California Achievements Test, Form E, related to reading, language and mathematics were administered as posttest in the spring of the first and second year of the study. An attitude measure was given as pretest and posttest. This measure asked students to rate

their attitude toward and their perceived ability in reading, language arts, and mathematics. For each subject, the students were also asked to rate their interest and their ability on a 3-point scale ("I like it a lot" / "I don't like it" and "I am really good at this"/"I am not very good at this"). The social relations measure asked students to list the names of their friends in the class was administered as a pretest and posttest at approximately the same time they were given the other pretests and posttests. The results related to social relations measures were analyzed by comparing the average number of friends listed by treatment and control students. For learning disabled students, the social relations measures were reanalyzed to determine the number of times each learning disabled student was selected as a friend by his/her non handicapped peers. During treatment, treatment schools adapted the cooperative elementary school model and comparison schools continued using their regular teaching methods and curriculum. Both the schools allocated the same amount of time to reading, language arts, and mathematics instruction daily, in compliance with school district guidelines. Results showed that related to differential effects on achievement, attitudes or social relations at different grade levels, no grade-by-treatment analyses were significant, so the data were collapsed across grade levels. Results related to social relations measure revealed that there were no significant differences on the premeasure, $t < 1.0$. On the post measure, the students in the treatment schools listed significantly more friends than did students in the comparison schools. The magnitude of the significant effect was $+0.42$ standard deviations. Initially, there were no significant differences between the treatment groups on learning disabled students' social relations, as measured by the number of friends they selected. On the post measure, learning disabled students in the treatment schools listed significantly more friends than did their counterparts in the comparison schools. The social relations measure was also used to assess the level of the social acceptance of mainstreamed learning disabled students, as measured by the number of times learning disabled students were selected as friends by their nonhandicapped classmates. Initially, there were no significant differences. On the post measure, learning disabled students in the treatment schools were selected as friends by nonhandicapped students significantly more often than were their counter parts in the comparison schools. Initially, there were no significant differences between gifted students in the cooperative elementary school and those in the comparison schools on the number of friends they listed. After 2 years in the cooperative elementary school, gifted students reported significantly more friends than did the gifted students in the comparison schools. The gifted students in the cooperative elementary school averaged 1.5 more friends, an effect size of $+0.46$. The students in the cooperative elementary school listed significantly more friends than did students in the more traditional schools, indicating that there were better peer relations in the cooperative elementary schools.

Holliday (1996) evaluated the effects of the cooperative learning strategy Jigsaw II on academic achievement and cross race relationships in secondary social studies classrooms. Subjects were 90 ninth grade geography students

in a high school of the Mississippi Gulf Coast. The teachers and students were paired and arbitrarily assigned to either a treatment group or comparison group. In this six-week study both quantitative and qualitative data collection was used. The quantitative data collection consisted of the administration of a pre-sociogram and posttest to measure academic achievement. The qualitative data collection consisted of administration of a pretest and postsociogram, administrator, teacher, and student interviews, participant observation, and a cooperative learning attitudinal survey administered only to the treatment group to determine cross-race relationships. In this study, to test the hypotheses, achievement test developed by the researcher and Multiple Linear Regression was used. More specifically the ANCOVA was used under the framework of Multiple Linear Regression. The results revealed that cooperative learning had an effect only on the interaction between academic ability groupings and academic achievement, while revealing no significant interaction between gender, race relationships and methodology and academic achievement. The qualitative data analysis showed that the major effects of the cooperative learning on the secondary students were affective rather than cognitive. The results of sociograms, interviews, participant observation, and the attitudinal survey verified that perception of success were present in the students, but there appeared to be no improvement in cross-race relations.

Jackson (1998) investigated the effects of cooperative learning on the development of cross-racial friendships. This study involved the investigation of the Student Teams Achievement Division (STAD) cooperative learning method designed to promote cross-racial friendships. This study investigated two additional dependent measures namely Interpersonal Relationship Assessment Technique (IRAT) that were hypothesized to be more representative of friendship than those currently used in the literature. The participants were 92 seventh grade students at a desegregated middle school. The experimental group studied worksheets in 4 to 5 member biracial teams and received recognition based on the sum of members' quiz scores. Control students studied alone and received individual scores only. Both the groups were compared to examine the effects of these instructional formats on multiple measures of friendship. Results indicated that when using the traditional nomination measurement, black males reported significantly more cross-racial friendships than black males in traditional classes. Cooperative instruction did not produce significant effects for white males, black females or white females.

Cook (2000) conducted a study to gauge the impact of cooperative learning teams on interracial friendships. The participants were 256 sixth, seventh and eighth grade students in English classes (20% African American and 80% Caucasian) at a rural middle school in Louisiana. After delivery of instruction, the experimental group studied worksheets in teams, received rewards based upon the team's performance, and received individual grades based upon individual examination scores. The control group studied worksheets individually and received individual grades. This eight week study utilized the sociometric question, "Who are your friends in this class?" as the pretest and

posttest instrument. The data were analysed using dependent and independent samples t-tests. The results revealed that cooperative learning did increase close cross-race friendships, although not significantly. However, results indicated that cooperative learning significantly ($p = .001$) increased the number of strong cross-race friendships. It was also determined that there was no significant difference in the impact of cooperative learning on African American and Caucasian students' interracial friendships.

Satyaprakasha (2001) conducted a study to find out the effect of cooperative learning on achievement and process skill in biology, achievement motivation, children's learning preference and social relations. One of the objectives of the study was to study the effect of cooperative learning strategy on social relations. Hypothesis of the study was cooperative learning strategy would improve social relations. In the present study, pretest-posttest equivalent group design was used. Two groups of students of class VIII were selected for the study and were considered as experimental and control group respectively. The experimental group was exposed to cooperative learning strategy of "Learning Together" model (Johnson and Johnson, 1975) and the control group was taught by conventional method of teaching. The sample consisted of students of class VIII from three schools of Tumkur town. Sociometric Test developed by investigator based on Moreno's sociometric technique. During treatment, at the beginning of each lesson, students of experimental group were divided into six members heterogeneous groups. They were given the discussion material for each lesson. After a brief introduction by the teacher, students were given specific learning tasks and other resource materials related to the lesson. Students were instructed to work on instructional tasks by discussing and doing various activities together. Each group gave back the activity sheets and they received praise as a group, based on how well they worked together and how they have done on the group tasks. The treatment period was spread over for 2 1/2 months. To analyze the social relations, the sociograms were drawn based on sociometric status scores. The major finding of the study were 1. the sociograms of the posttest of experimental group of school I, II and III revealed that cooperative learning strategy was not found effective in decreasing the number of stars, bringing change in star status and also in integrating isolates into the group but it was effective in improving social relations in terms of decreasing rejection and increasing the acceptance for opposite sex.

V. CONCLUSION

Review of the studies related to effect of cooperative learning on social relations revealed that many studies has been conducted at different grade levels in this regard. Based on the results of the studies, it can be concluded that cooperative learning strategy has positive effects on improving social relations of the students with respect to sex, race, disability, interpersonal attraction, peer acceptance, cross-sex and cross-ethnic relationships and number of friends.

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