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The effect of cooperative learning on student social attitudes

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The effect of cooperative learning on student social attitudes

Abstract
The effects of cooperative learning on student social attitudes was investigated in two parts. The first part presented a literature review which focused on the effect cooperative learning has had on social acceptance among various ethnic groups in culturally diverse classrooms and on mainstreamed mentally handicapped students. The results showed that, in general, cooperative learning as an instructional strategy does have positive effects on the formation of cross-racial friendships, increases the acceptance of differences among ethnically diverse students, and promotes positive attitudes among normal-progress students and those who have been mainstreamed due to handicaps. The second part was an investigation of the effect of cooperative learning on student self-concept and social attitudes among students and their peers. The subjects were 44 seventh grade students from two intact personal development classes. A sociogram designed to determine the patterns of relationships within the class and the Piers-Harris Self-Concept Inventory were administered to each student at the beginning of the study. Students were then randomly assigned to heterogeneous groups of three or four. Through the use of cooperative learning strategies, each group was given the task of researching and presenting information about a particular body system to the whole class. These groups met for 50 minutes each day for a total of four weeks. At the end of that time period, the Piers-Harris Self-Concept Inventory and the same sociogram were readministered to each student. The results on both instruments showed little change. The cooperative learning strategy did not appear to affect either the self-concepts of the students or their feelings about their peers in the classroom.
THE EFFECT OF COOPERATIVE LEARNING
ON STUDENT SOCIAL ATTITUDES

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ABSTRACT

The effects of cooperative learning on student social attitudes was investigated in two parts. The first part presented a literature review which focused on the effect cooperative learning has had on social acceptance among various ethnic groups in culturally diverse classrooms and on mainstreamed mentally handicapped students. The results showed that, in general, cooperative learning as an instructional strategy does have positive effects on the formation of cross-racial friendships, increases the acceptance of differences among ethnically diverse students, and promotes positive attitudes among normal-progress students and those who have been mainstreamed due to handicaps.

The second part was an investigation of the effect of cooperative learning on student self-concept and social attitudes among students and their peers. The subjects were 44 seventh grade students from two intact personal development classes. A sociogram designed to determine the patterns of relationships within the class and the Piers-Harris Self-Concept Inventory
were administered to each student at the beginning of the study. Students were then randomly assigned to heterogeneous groups of three or four. Through the use of cooperative learning strategies, each group was given the task of researching and presenting information about a particular body system to the whole class. These groups met for 50 minutes each day for a total of four weeks. At the end of that time period, the Piers-Harris Self-Concept Inventory and the same sociogram were readministered to each student.

The results on both instruments showed little change. The cooperative learning strategy did not appear to affect either the self-concepts of the students or their feelings about their peers in the classroom.
CHAPTER I

Introduction

I’m not receiving the same positive response from my students. In the past, I felt more like a coach to my students, helping them achieve the highest level of skills they’re capable of. But I’ve felt more in an adversarial position recently and I don’t know why. It’s almost as if they say, "I defy you to teach me." I had one class of students last year with a dozen chronic behavior problems. I dreaded dealing with that class every day. It affected my whole life. (E.L. Boyer, 1983, p. 162.)

The growing problems of a complex society are penetrating the nation’s schools. Teachers are expected to perform beyond their professional roles as they try to meet not only the cognitive, but also the emotional, social, and physical needs of an increasingly diverse group of students. At least half of the school population in America today is made up of students who speak a language other than English and who are culturally
"different" from their peers (Adams, Carlson, & Hamm, 1990). By the 21st century, no single ethnic group will constitute a majority in the state of California (The 1988 U.S. Commission on Civil Rights as cited by Grant, 1990). A changing cultural balance will be evidenced in the workplace; only two out of five new workers will be white males (Adams, Carlson, & Hamm, 1990).

In addition to an increase in ethnic diversity, greater heterogeneity in the classroom also has occurred since the passage of Public Law 94-142 which mandated that academically handicapped students must be placed in the least restrictive environment, or mainstreamed into regular classes whenever possible (Slavin, Madden, & Leavey, 1984). This emphasis on mainstreaming means that students with learning disabilities and mild mental retardation are frequently no longer found in the special education, self-contained classrooms of the past. They are mixing with the "normal" students who already display a wide range of abilities in the regular classroom.
At the same time that this increase in student diversity has occurred in classrooms, the family structure in America has changed dramatically. No longer does the family consist of "breadwinner" father, "stay-at-home" mother, and one or more children living with them. Because of the increase of mothers working outside of the home, less than ten percent of children under eighteen now live in a family in which one parent (most likely the father) is the breadwinner (Census Bureau, as cited by Santrock, 1987). Higher divorce rates and remarriages have resulted in a full spectrum of family structures which include single-parent and stepfamilies. If current trends continue, again by the 21st century, one-fourth to one-third of all children, before reaching the age of eighteen, will have lived at least a portion of their lives in a stepfamily (Santrock, 1987). The traditional family structure which used to provide support for its members no longer exists. As a result, the schools of today have had to address the students’
social and emotional needs as well as their academic progress.

In establishing broad educational goals, then, teachers must concern themselves with the socialization process of the students. Individual acceptance toward those who are different is critical if students are to learn how to live effectively in a multicultural society. The type of classroom instruction a teacher selects influences student perceptions; instructional goal structures lead to different patterns of interactions among individuals which in turn greatly influence the attitudes individuals form towards one another (Martino and Johnson, 1979).

There are three possible goal structures which can be implemented in a learning situation: competitive, cooperative, and individualistic (Johnson & Johnson, 1974). The competitive structure, in which students are expected to outperform each other, where one student achieves goals only if others fail to achieve them, represents the traditional approach of American education (Johnson & Johnson, 1974). The
cooperative structure is one in which students' goal attainments are positively correlated; that is, if one student achieves a goal, all others do, too (Johnson & Johnson, 1983). The individualistic situation is where the goals of each person are independent of anyone else; whether an individual meets his/her goal has no influence upon whether other individuals accomplish their goals (Johnson & Johnson, 1974).

When considering student socialization, individual goal structures do not promote student interaction. In a similar sense, traditional instructional methods, or the competitive classroom structure, permit only superficial contact between students, even though they may be sitting close to one another (Slavin, 1985). "Our behaviors are determined to a large extent by the situations we're in" (Kagan, 1990, p. 9). If students are to grow in their ability to understand and accept one another, the cooperative goal structure as a promoter of positive student interrelationships needs to be investigated.
Statement of Purpose

The purpose of this paper is to investigate how cooperative learning strategies affect student social attitudes. The following questions will be addressed:

1. What are the most common cooperative learning methods?

2. What effect has cooperative learning had on social acceptance among various ethnic groups in culturally diverse classrooms?

3. What effect, if any, has cooperative learning had on the social acceptance of the mainstreamed mentally handicapped student?

Importance of the Problem

As the nation's classrooms continue to reflect the problems inherent in a growing multicultural society, it is paramount that educators seek more effective methodologies for dealing with a diverse student population. Cultural diversity can be an asset rather than a
hindrance in school if students are educated in interpersonal skill development, and have learned to overcome race, language, and intellectual barriers. If students are going to eventually function effectively within the American society, they need to understand and accept differences among the American population. This study will help determine if the use of cooperative instruction teaches respect for and value of differences among individuals, particularly those belonging to separate ethnic groups, and those who are mentally handicapped.

Definition of Terms

For the purposes of this study, the following terms will be defined:

Cooperative Learning: an instructional method which uses small groups and includes the following elements:

(Johnson & Johnson, 1986).

Positive interdependence: the perception by the students that they are linked to
one another and cannot succeed individually unless the group succeeds (Johnson & Johnson, 1986).

Individual accountability: the idea that each person is ultimately responsible for his/her own learning and individual contribution to the group (Johnson & Johnson, 1986).

Collaborative skills: skills which are taught and include leadership, decision-making, trust-building, communication, and conflict management (Johnson & Johnson, 1986).

Group processing: time established to discuss the functioning of the group and how to establish and maintain effective working relationships among group members. (Johnson & Johnson, 1986).
CHAPTER II
Review of the Literature

Statement of Purpose

The purpose of this chapter is to synthesize a review of the literature related to how cooperative learning affects student social attitudes. In order to do so, it is necessary to first establish background information on the nature and types of cooperative learning strategies outlined in many of the cooperative learning studies. Five strategies, STAD, TGT, Jigsaw, TAI, and CIRC, will be discussed. Then, research findings dealing with the effect of cooperative learning on cross-racial attitudes and the acceptance of the mentally handicapped student will be presented.

Cooperative Learning Strategies

The simplest cooperative learning method and one which can be adapted to most subject matter and grade levels (Adams, Carlson, & Hamm, 1990), is called Student Teams-Achievement Divisions, or
STAD. It consists of four or five-member learning teams which are ethnically and academically balanced; each group being a microcosm of the entire class. Through discussion or lecture, the teacher each week introduces new material, then provides the learning teams with worksheets so that they can, as a group, learn the material. They can employ whatever means they think is best for each person to master the new concepts.

Following this team practice, the teacher gives a quiz to each individual. Team members cannot receive help from one another at this point. The teacher then records the scores and gives a team score based on the outcomes. Each week these scores are recognized in a class newsletter, along with students who have exceeded their own past records by the largest amounts or who have completed perfect papers (Slavin, 1988).

A second cooperative learning strategy which is closely related to STAD is Teams-Games-Tournaments (TGT). This approach also utilizes four to five-member learning teams who study together over teacher-introduced material,
but demonstrate mastery of material through the use of academic games. Students play these games in weekly tournaments in which they compete with members of other teams who are comparable in past performance. High-performing students from teams compete against each other as do average-performing and low-performing students. While the learning groups stay together for about six weeks, the tournament table assignments change each week depending on performance. What is stressed is each student doing his/her best and contributing to his/her original learning group. All students, regardless of capability, can help increase the overall group score (Slavin, 1988).

Jigsaw is another cooperative learning technique. Here, students are assigned to six-member teams and deal with academic material which has been broken down into five sections. Each person takes one section, with two students sharing one section. Then, members of different teams who have studied the same section meet together in "expert" groups to discuss the material. Next, students return to their original
groups and teach the remaining group members about their sections. The focus is on each individual listening carefully to his/her teammates in order to learn all of the material (Slavin, 1988).

TAI, or Team Accelerated Instruction, is a strategy often used in elementary and middle school mathematics classes. In TAI, students work in the same heterogeneous teams as in STAD or TGT, but each student works at his/her own level and rate. Worksheets are scored by student monitors (who change daily), and team scores are based on the average number of units, regardless of subject matter, covered in one week. All of the activity is student-directed with the exception of final tests administered by the teacher in each area. Teams that achieve a pre-established criteria receive some type of team reward (Slavin, 1988).

A more recent type of cooperative learning is a comprehensive program for teaching reading and writing called CIRC, or Cooperative Integrated Reading and Composition. Much like traditional reading programs, teachers use reading groups and basal readers, but pair students up with one
student from each group. While the teacher works with one group, the pairs of students work at their seats on various activities such as: practicing vocabulary and spelling, reading to one-another, summarizing stories, predicting events in stories, and writing responses to stories. In writing classes, students, likewise, work in pairs when developing first drafts, revising, editing, or preparing papers for publishing (Slavin, 1988).

By using one or a combination of these strategies, two of the expected outcomes, according to Slavin, (1988), are: 1) the developing of positive race relationships within the integrated classroom, and 2) the fostering of social acceptance of physically and mentally handicapped children by their normal-progress peers in the classroom where mainstreaming has occurred. It is of interest, now, to analyze and synthesize the literature related to each of these points.
Desegregation is a complex process that was begun with noble intentions but implemented, as are all policy innovations, bearing the scars of compromises and imperfect vision. It is remarkable that desegregation has survived as long as it has and has enabled so many millions of children to experience a multiracial education. (Taeuber, 1990, p. 24)

Since 1954, when the Supreme Court ruled in Brown vs. the Board of Education that it was unconstitutional to segregate the public schools (Grant, 1990), there has been a true mixture of races and ethnic backgrounds in the nation’s classrooms. In addition to African-Americans and Native Americans who constitute growing minority groups, a population boom among Hispanics and Asian-Americans has occurred (Grant, 1990). Even though these various minorities attend school together today, the friendship patterns remain generally within the students’ own ethnic groups (Gerald & Miller, as cited by Slavin, 1985), and interaction between groups is limited.
In 1975, Stephan and Rosenfield conducted a study which examined the effects of desegregation on the interethnic contact and attitudes of blacks, whites, and Mexican Americans. They found that each separate group had much more contact with members within the group than with members outside the group. They further discovered that students from segregated backgrounds actually developed more negative attitudes toward other ethnic groups after desegregation than they had held before desegregation (Stephan & Rosenfield, 1978). "Simply placing heterogeneous students in the same school or classroom will not ensure that they will interact in constructive ways and develop positive attitudes toward each other" (Cooper, Johnson, Johnson, & Wilderson, 1980. p. 243).

There have been several studies, however, that support the idea that racial attitudes will improve in the integrated classroom if cooperative learning methods are employed. In 1980, for example, Kagan conducted a large-scale research project with student teachers at the school of
education of the University of California at Riverside. He randomly assigned a total of 50 student teachers to teach either traditional classroom methods or cooperative methods to some 2000 ethnically-mixed students. After analyzing measures of ethnic relations, he concluded that cooperative learning did indeed improve racial relations among students (Kagan, 1990).

We've had court-mandated desegregation in this country for some time, but it hasn't served to improve race relations, because students quickly self-segregate; we have desegregation without integration. With cooperative learning there is true integration because students become friends with their teammates. (Kagan, 1990, p. 10)

Slavin, likewise, was able to conclude that cooperative learning has a positive effect on the formation of cross-racial friendships (Slavin, 1979). In a study conducted in Baltimore in 1979, he used as his sample 294 seventh and eighth grade students from two inner-city junior high schools. One-hundred twenty-four students were black; 170
were white. The students were randomly assigned to either a control class where traditional teaching methods were taught, or to an experimental class where the cooperative learning method STAD was taught. For ten weeks they worked on a grammar, punctuation and English usage unit with all classes receiving the same initial instruction, worksheets, and quizzes.

A sociometric instrument which asked, "Who are your friends in this class?" was given as a pre and postmeasure. Members of the experimental classes increased more than members of the control classes both in the number of friends they named of the other race and in the proportion of cross-race choices made over all the friendship choices. In addition, a follow-up sociometric measure given 9 months after the project still demonstrated significantly more cross-race choices in the experimental group than in the control group (Slavin, 1979).

The Jigsaw method of cooperative learning was investigated by Blaney, Stephan, Aronson, Rosenfield, and Sikes (1977) to ascertain if it
would affect the interrelationship patterns of ethnically mixed students. Three-hundred four fifth graders from thirteen classes in seven schools in Austin, Texas, made up the sample. Two-hundred forty-five subjects who were of Anglo, Black, and Mexican-American backgrounds represented the experimental group, and 59 similarly ethnically-mixed students constituted the control group. The experimental groups (ten classes) met for forty-five minutes each day, three days per week, for a total of six weeks, in a Jigsaw cooperative learning approach used for a social studies unit. The control group covered the same material, but within the framework of the traditional, or competitive, classroom goal structure.

At the beginning and end of the six-week study, a sociometric instrument was administered in order to assess changes in students' liking of their classmates. The instrument created a hypothetical situation where students had to pretend they were going to a fun island in a small boat which only carried a few people at a time.
Each student had to decide how soon he/she would want each of his/her classmates to join him/her on the island by assigning scale values from one to seven to each classmate. Seven indicated the greatest liking, and one indicated the least.

Jigsaw groups from all ten experimental classrooms responded similarly. Increased liking for groupmates, regardless of ethnic background, occurred over the six week period, while no such change was noted in the control group. The hypothesis that experimental subjects would increase in liking for their groupmates relative to liking for the rest of the class was supported by the sociometric scores (Blaney, Stephan, Rosenfield, Aronson, & Sikes, 1977).

Further supporting the theory that cooperative learning produces positive outcomes on student friendship was a study done in 1981 by Slavin and Karweit. They investigated the effects of the TGT, STAD, and Jigsaw cooperative methods on a group of fourth and fifth graders from rural Maryland. An experimental group with randomly assigned students was taught math, language arts,
and social studies for the bulk of the day using cooperative learning. The control group followed the same curriculum, but utilized traditional learning methods. Sociometric items, asking such questions as "Who are your best friends in school?" and "If you were going to be working on a project with other children, which children would you not want to have in your group?" were given on pre and post tests. After a school semester, the results of the study showed that members of the experimental group reported a larger number of friends in school and a smaller number of classmates with whom they would prefer not to work than did those students in the control group.

Cooperative learning, in addition, can be used in classrooms which differ demographically from ones in the United States and will still yield positive results for the social acceptance of students from diverse backgrounds. A study done in Toronto, Canada, in 1980, dealt with 146 sixth grade children who were characterized by the following ethnic breakdown: 44% were Anglo, 14% were Italian, 12% were Chinese, 8% were Greek, 8%
were West Indian, and 14% comprised the "other" category. The students were randomly assigned to either an experimental group which used Jigsaw, or a control group using traditional teaching methods to study social studies content. Both groups were given a sociometric measure which dealt with friendship patterns, and an attitudinal questionnaire designed to measure acceptance of social diversity.

The results were significant. After an eight week period, the experimental group showed a greater increase in casual, cross-ethnic friendships than did the control group. On the attitudinal questionnaire, however, results showing an increase in positive attitudes toward different ethnicities among experimental group members did not last beyond the eight week period (Ziegler, 1981).

One study conducted by Weigel in 1975 did not support other findings that cooperative learning enhances cross-cultural friendship patterns (Weigel, Wiser, & Cook, 1975). Weigel investigated incoming 7th and 10th grade
populations at a junior and senior high in Denver, Colorado. Both were comprised of a total of 231 white students, 54 black students and 39 Mexican-American students who were attending integrated classrooms for the first time, a situation "...characterized as unintended interethnic contact" (Weigel, Wiser, & Cook, 1975, p. 226). Six junior high and high school classes were paired with six similar classes; the students were randomly assigned and ethnically balanced. One in the pair was taught English using the whole-class method of lectures, discussions, and individual assignments as classroom procedure; the other used a STAD cooperative learning model which incorporated 4-6 member interethnic teams. Each separate pair was taught by the same teacher.

Results of this study were determined by using teacher interviews of their perceptions of students involved in both conflict and helping behavior, and questionnaires where each student rated all his/her classmates in the English section on four desirable personal attributes and listed names of up to ten students with whom
he/she would like to work and 10 with whom he/she would like to be at a party. In addition, data on attitudes toward other ethnic groups were obtained from an interview administered three months after the research was terminated. Items from these interviews used to measure ethnic attitudes were drawn from a factor-analyzed attitude scale, the Multi-Factor Racial Attitude Inventory (Woodmansee and Cook, 1967, as cited by Weigel, Wiser, & Cook, 1975).

The findings which supported the use of cooperative learning as a positive influence on interethnic relationships were the teacher responses, and the fact that while a low level of conflict in general was reported in both types of classes, 90% occurred in the whole-class instructional situation contrasted with 45% occurring in the cooperative structure. In the assessment of ethnic attitudes toward one another, however, there were no significant main effects from either teaching methodology on the white, black, or Mexican-American students.
Weigel speculated that this lack of influence upon ethnic attitudes was due to the fact that in the STAD model, the small groups competed against each other, a process which made winners and losers out of the groups. "We found that the more the white, black, and Mexican American subjects in the experimental classes perceived their own work group as successful and competent in the intergroup competitions, the greater their relative attraction to their own work group members versus their other classmates" (Weigel, Wiser, & Cook, 1975, p. 240.) Competition may inhibit growth of within-group mutual respect; failure may induce students to blame one another rather than offer support.

A problem in trying to create more acceptance among students from different ethnic groups occurs in schools where the student population is homogeneous rather than heterogeneous. Due to lack of exposure to peers from different ethnic origins, it can be conjectured that "...students in these schools will not develop the attitudes and skills needed to interact effectively with
persons who are ethnically, culturally, or otherwise heterogeneous in future career and community settings" (Johnson, Johnson, & Scott, 1978, p. 214). In a cooperative learning study done in 1978 in a suburban, upper-middle-class school, however, Johnson, Johnson & Scott concluded that even in such a setting, cooperative learning does have a positive effect on acceptance of heterogeneity among students (Johnson, Johnson, & Scott, 1978). They used as their subjects 30 fifth and sixth grade white students who were in an advanced math class. The students were randomly divided into cooperative and individualized conditions for studying math one hour a day for 50 days. During this time period, the teachers kept a daily log of their observations, students were interviewed about their perceptions of their respective goal structures, and a two sociograms were administered. At the end of 50 days, each student was given a post-experimental questionnaire consisting of questions taken from the Minnesota School Affective Assessment. In addition, they
were presented with questions about pictures of two groups of students. One picture depicted four white students of the same age and sex; the other showed two boys, two girls, one black, and one native-American. The subjects were to decide which group they would like to join, which group members they would like to have as friends.

Results of the study revealed that the students in the cooperative learning groups had more positive attitudes toward heterogeneity than those in individualistic structures. There was also a marked increase in positive attitudes toward fellow group members in the cooperative learning structure.

**Summary of Race Relations**

Cooperative learning, then, does seem to enhance student social growth in the area of greater acceptance of ethnic and cultural differences. Because the cooperative structure is based on mutual helping and interdependence, it seems to promote greater feelings of being accepted by peers than do either the individualist
or competitive goal structures (Cooper, Johnson, Johnson, & Wilderson, 1980). "It is the social isolation inherent in the traditional classroom instruction that is the source of the lower level of interpersonal attraction" (Cooper, Johnson, Johnson, & Wilderson, 1980, p. 251).

A noncompetitive cooperative treatment where all teams are rewarded in some manner rather than having winning and losing teams might allow for still greater gains in cross-race attraction (Slavin, 1979). As Weigal, Wiser, & Cook (1975) pointed out, team competition, resulting in some teams failing, might hinder development of positive attitudes for others if group members hold each other responsible for the lack of success.

The two essential components of the team learning experience are the heterogenous nature of the group and the interdependence of group members in pursuit of a common goal. Thus, if there is a hidden agenda, its essential message is that children can learn from one another, no matter how different
those others are. Surely that is not a bad lesson for schools anywhere to be teaching. (Ziegler, 1981. P. 267)

Acceptance of Handicapped Students

Classroom diversity has not only grown because of the increase of ethnic minority populations in the United States, but also because of Public Law 94-142. Its passage mandated that academically handicapped students be placed in the least restrictive environment possible; most are now mainstreamed into the regular classroom setting. (Leavey, Madden, & Slavin, 1984).

Placing handicapped students in the regular classroom provides an opportunity for promoting positive relationships between them and their non-handicapped peers, thereby potentially influencing their lives. Mainstreaming, however, carries with it a risk of making things worse rather than better; if the process goes badly, handicapped students will experience increased rejection, stigmatization, and stereotyping (Johnson & Johnson, 1986).
The classroom teacher has as his/her job, the responsibility of ensuring that mainstreaming of the academically handicapped goes well. How he/she structures the relationships among students and influences the pattern of student interaction are essential. According to Johnson & Johnson who reviewed all available studies comparing the three types of instructional situations on relationships among students (cooperative, competitive, and individualistic), "... research indicates that classrooms should be dominated by cooperation among students and is especially true when handicapped students are being mainstreamed" (Johnson & Johnson, 1986, p. 553).

In their meta analysis of 98 studies conducted between 1944 and 1982, they reached several conclusions. First, handicapped students initially are stigmatized and viewed by their peers in prejudicial and negative ways. Second, physical proximity is not enough to change these attitudes; rather, the critical component in affecting student perceptions is how the teacher establishes the goal structure in the classroom.
Third, if a cooperative structure is dominant, the handicapped and non-handicapped peers interact positively, feel supported, and are able to gain understanding of each others' perspectives (Johnson & Johnson, 1986). It is of interest at this point to review a few of these studies in more detail.

Ballard, Gottlieb, Corman, & Kaufman (1977), investigated the effect of cooperative learning groups on the social status of EMR children among the normal peers in the regular classroom. Thirty-seven mainstreamed educable mentally retarded (EMR) children in grades three, four and five in two school districts in Texas were randomly assigned to a control group or an experimental group. In the experimental group, four to six member teams which were evenly distributed by ethnic background, sex and academic ability, planned, produced and presented a multimedia project on a topic from social studies, science, or language arts. They worked for forty minutes every day, five days per week, for a total of eight weeks.
Before treatment of the experimental group, all the students received a forced-choice sociometric instrument on which they were required to indicate whether they liked, disliked, were neutral toward, or did not know fellow classmates. Within two to four weeks after the end of the treatment, the instrument was given again as a posttest.

The results showed that the average acceptance of the experimental subjects among all the groups of raters increased while the average rejection rate of the experimental subjects decreased. In the control group, the opposite result occurred; the average acceptance rate decreased while the rejection rate of peers increased.

To the extent that these findings are reliable, they suggest that EMR children's social status deteriorates in the absence of systematic intervention. That is, not intervening to improve the retarded child's acceptance rather than serving to maintain his social position may actually result in a
decline in his status among his peers.

(Ballard, Coleman, Gottlieb, & Kaufman, 1977, p. 610)

Johnson & Johnson also found greater acceptance of handicapped students among nonhandicapped students in a study they conducted in 1981 (Johnson & Johnson, 1981). Their subjects were forty third graders from three different classrooms in a midwestern school district. Eight of these students had severe learning and behavior problems and had been assigned to special education classes for reading, math, and behavior disorders. They were at least two academic years behind their classmates and/or were markedly disruptive. All eight were rejected by their classmates according to a sociometric roster-rating questionnaire administered before beginning the study.

All the students were randomly assigned and stratified by sex, ability, and handicap to one of two groups: the control group which employed an individualistic orientation to instruction, and an experimental group which used the STAD cooperative learning strategy. For twenty-five minutes each
day for sixteen days math was taught in both situations.

Interaction of the handicapped and nonhandicapped students during instruction and free time was observed and recorded during this time period. Additionally, a sociometric measure of cross-handicap liking, and three attitude scales (cooperation, individualistic, and peer support) were administered. It was found that there was far more interaction between the handicapped and nonhandicapped students in the cooperative structure than in the individualistic one. The authors concluded that it "... seems to be the experience of working together to achieve mutual goals that promotes the positive relationships between handicapped and nonhandicapped students" (Johnson & Johnson, 1981).

A study by Martino & Johnson in 1979, also sought to validate the theory that cooperative learning would enhance relationships between handicapped and normal-progress students, but differed in that behavioral evidence was gathered
rather than using sociometric devices (Johnson & Martino, 1979). Twelve second and third grade elementary school boys participated in a nine-day swimming course, learning swimming skills either in cooperatively structured pairs, or individually. Three normal-progress and three learning-disabled boys were assigned to each condition according to a stratified random procedure. Before the experimental sessions began, each child was asked to choose another child he/she would like to work with. No learning-disabled children were chosen by a normal-progress child and only one was chosen by another learning-disabled child.

In the experimental group, each learning-disabled child was paired with a normal-progress child. The pairs were then told they could help each other learn to swim, that, in fact, the goal was that they would both know how to swim, and that they would be evaluated as a pair, not as individuals. In the control group, the students were not paired, were encouraged to
work alone, and told that their goal was that each individual, separately, learn to swim.

The instructional time lasted for forty-five minutes, then the students were allowed fifteen minutes for free time. Trained, independent observers recorded the nature and frequencies of interactions between normal-progress children and learning-disabled children. The sessions were held four days a week for the first two weeks, and one day of the third week, for a total of nine days.

Results showed that the frequency of friendly and hostile interactions between normal-progress and learning-disabled subjects differed between the experimental and control groups. There were more friendly interactions in the cooperative than in the individual condition, and frequencies of hostile interaction between normal-progress and learning disabled subjects were generally higher in the individual than in the cooperative condition.

While generalizations from this study are limited because of the small sample size, it can
still be suggested that cooperative learning experiences promoted positive interaction between normal-progress and learning-disabled children; whereas, the individualistic condition tended to promote hostile interaction (Johnson & Martino, 1979).

In another study which took place outside of the classroom, a group of thirty junior high school students from a midwestern metropolitan area were involved in a bowling activity (Johnson, Johnson, Rynders, Schmit, & Haider, 1979). Twelve of the students functioned at the high-trainable stage; they were able to communicate and understand basic instructions given in the study, though they were classified as being mentally retarded. By random assignment, they were placed in one of three structures: cooperative where they were supposed to help one another and maximize the group score, individualistic where they were supposed to concentrate only on their individual scores, and laissez-faire where they were given no instructions. As they bowled, observers recorded the frequency of positive, neutral, and negative
interactions between the bowler and the other students. In addition, observers recorded the frequency of all the students within a condition simultaneously cheering as a group for one of their bowlers.

The results indicated that there were more positive interactions and more positive reinforcement of the mentally handicapped students by the nonhandicapped students in the cooperative setting than in the other two situations. "... severely handicapped students can be integrated (mainstreamed) into some activities with nonhandicapped students in a way that benefits both handicapped and nonhandicapped students by increasing the amount of support, encouragement, and reinforcement each student receives from classmates" (Johnson, Johnson, Rynders, Schmidt, & Haider, 1979, p. 166).

More recently conducted studies also seem to support the findings of the Johnson & Johnson meta-analysis of studies completed between 1944 and 1982 (Johnson & Johnson, 1986). Slavin, Madden & Leavey found in 1984 that handicapped
students in TAI cooperative structure gained significantly more friends as measured by sociometric nominations than did students in an individualized instructional setting (Slavin, Madden & Leavey, 1984). Similarly, in 1983, Johnson & Johnson found that the cooperative setting promoted more interaction between handicapped and nonhandicapped than did either the competitive or individualistic goal structure, and that the relationship continued into postinstructional time (Johnson & Johnson, 1983). Slavin & Madden (1983), in addition, discovered that rejection of academically handicapped students by normal-progress peers was significantly decreased by the cooperative treatment as compared to the individualized structure in a study done in Baltimore in 1983.

Summary of Acceptance of Handicapped Students

According to the research, then, cooperative learning structures do have a positive effect on
the social acceptance of academically handicapped students by their normal-progress peers.

The findings indicate that cooperative learning experiences will promote more interaction between handicapped and nonhandicapped students, that the interaction will be characterized by task involvement, helping, and encouragement, that more cross-handicapped friendships will develop, and that the cross-relationships will be more likely to generalize to postinstructional free-choice situations. (Johnson & Johnson, 1981, p. 422)
CHAPTER III
Empirical Study
Procedures

This study is an investigation of the effect of cooperative learning on student self-concept and social attitudes among students and their peers. The subjects were 44 seventh grade students from two intact personal development classrooms in a midwestern city. The sample consisted of 24 males and 20 females, all from white, middle class families.

At the beginning of the study a sociogram was administered to each student. It consisted of the following questions:

1. If you were working on a class project, name three students with whom you'd like to work.

2. If you were working on a class project, name three students with whom you would not like to work.

In addition, the Piers-Harris Self-Concept Scale was given to each student.
Students were then randomly assigned to heterogeneous groups. Each group had three or four members and were given the tasks of researching and presenting information to the whole class about a particular body system. A cooperative learning condition was established as each individual had a role to play in order to assist in group functioning; each day one member would serve as noise monitor, another as time keeper, and another as task master. Each group was then assessed daily by the teacher on its ability to demonstrate cooperation among group members and individual contributions to group task completion.

These groups met for 50 minutes each day for a total of four weeks. At the end of this time period, the same sociogram and Piers-Harris Self-Concept Scale were readministered in order to determine if cooperative learning can affect student social attitudes and student self-concept.

Null hypothesis: There is no difference in student self-concept or social acceptance of student peers after participation in a 4-week
cooperative learning unit in seventh grade personal development class.
CHAPTER IV

Results

The impact of student participation in a cooperative learning unit on student self-concept and student social attitudes was examined in two comparisons: results on the Piers-Harris Self-Concept Scale administered before and after the unit, and results of a two question sociogram administered before and after the unit.

Self-Concept

The results of this investigation did not indicate any significant changes in student self-concept as a result of participation in a 4 week unit using cooperative learning as the primary instructional strategy. The following results were obtained from the analysis of data using a t-test. In personal development class, section 1, t = .18, p < .05; in personal development class, section 2, t = 1.19, p < .05. The null hypothesis was not rejected.
The raw scores of the Piers-Harris Self-Concept Scale of personal development class, section 1 are presented in Table 1. The raw scores of the Piers-Harris Self-Concept Scale of personal development class, section 2 are presented in Table 2.
Table 1

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n = 22   X diff. = .227   SD = 6.015   t = .18
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n = 22  x diff = 2.27  SD = 8.93  t = 1.19
Social Attitudes

Results of the two sociogram questions appear in Tables 3 and 4. Like the self-concept investigation, no significant changes in social attitudes appeared to occur as a result of participation in a 4 week cooperative learning instructional strategy. Students basically followed the same pattern of student choices regardless of whether they were choosing peers with whom they did want to work, or were selecting peers with whom they did not want to work. Tables 3 and 5 show the results from personal development class, section 1, and Tables 4 and 6 show the results from personal development class, section 2.
Table 3

Question: With whom would you like to work in a group?

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Table 4

Question: With whom would you like to work in a group?

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Table 5
Question: With whom would you not like to work?

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Table 6
Question: With whom would you not like to work?

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The purpose of this study was to analyze and synthesize the literature related to how cooperative learning strategies affect student attitudes. The findings were helpful in two areas in particular: how cooperative learning contributes to the formation of positive interracial relationships in the classroom, and how cooperative learning helps in the acceptance of the academically handicapped students by their nonhandicapped peers.

Before addressing these two areas, the researcher first had to provide background information as to how cooperative learning strategies are conducted in the classroom and what the most common procedures are. Five strategies were discussed in detail: Student Teams-Achievement Divisions (STAD), Teams-Games-Tournaments (TGT), Jigsaw, Team Accelerated Instruction (TAI), and Cooperative
Integrated Reading and Composition (CIRC). These strategies were then referred to as various studies on cooperative learning's effect on student social attitudes were investigated.

The first category under investigation was how cooperative learning affects race relationships. Studies by Stephan & Rosenfield (1978) and Cooper, Johnson, Johnson, & Wilderson (1980) supported the idea raised by Gerald & Miller (as cited by Slavin, 1985) that desegregation in the classroom is not enough; students do not develop cross-ethnic friendships merely by attending ethnically-mixed schools. Other studies conducted by Kagan (1990), Slavin (1979), Blaney, Stephan, Aronson, Rosenfield, & Sikes (1977), Slavin & Karweit (1981), Ziegler (1981), Johnson, Johnson & Scott (1978) found that the use of cooperative learning methods does, in general, increase the amount of student interaction among ethnically diverse students, have positive effects on the formation of cross-racial friendships, and increase the acceptance of ethnic and cultural differences.
among the students in the classroom. "It seems logical that if we assign students to work together on a common task toward a common goal, where each individual can make a substantial contribution to the mutually desired goal, the students will learn to like and respect one another" (Slavin, 1980, p. 106).

One study done by Weigel, Wiser, & Cook (1975) did not support the other research depicting cooperative learning as a positive method of enhancing cross-cultural relationships. Ethnic attitudes did not change after the subjects were involved in a cooperative learning structure. Weigel speculated that the competitive intergroup setting may have caused some cooperative groups to feel they had failed, thereby instilling some negative feelings toward other group members.

The second area addressed by this study was the effect of cooperative learning on the social acceptance of academically handicapped students by their normal-progress peers. Johnson & Johnson's meta-analysis of 98 studies (1986) provided substantial data which documented the use of
cooperative learning as a promotor of positive attitudes among normal-progress students and those who have been mainstreamed due to handicaps. They maintained that, like in the case of desegregated classrooms, relationships will not develop positively just because students are in close proximity to one another. The type of goal structure which determines the type of student interaction in the classroom is the critical element to fostering positive relationships.

Slavin, Madden, & Leavey (1984), Johnson & Johnson (1983), and Slavin & Madden (1983) conducted investigations after the Johnson and Johnson's meta-analysis of studies done between 1944 and 1982, and found support of the positive effect of cooperative learning on the social acceptance of academically handicapped students. "It seems to be the experience of working together to achieve mutual goals that promotes the positive relationships between handicapped and nonhandicapped students" (Johnson & Johnson, 1983, p. 329).
Conclusions

Part 2

The study of the use of cooperative learning in two intact seventh grade classrooms was designed to determine if student self-concept and/or student attitudes about their peers would change if students were engaged in cooperative learning activities for a prescribed period of time. The results of the study showed no significant difference in pre and post test assessments in either area. These findings seem to be in disagreement with the research presented and discussed in the literature review.

One factor which may have influenced the outcome of the study was the length of time given to the treatment or the unit where cooperative learning was the central instructional method. Students met in cooperative groups for 50 minutes every day for a four week period of time. A longer period of time for the treatment may be necessary before there is significant change in
how students view themselves and relationships with others.

Another influencing factor could be the time of year when the study was conducted. The cooperative learning unit was taught during the month of April; by that time in the year, the patterns of peer relationships within each classroom were well-established and therefore, probably harder to alter. It might be more beneficial to test the effect of cooperative learning on social attitudes at the beginning of the school year when students are first discovering where they might fit in the social hierarchy of the classroom. Such social concerns could, in addition, affect the students' self-concepts.

Though the results of the study did not support the idea that cooperative learning can have a positive affect on self-esteem and peer relationships, the researcher still believes that such an instructional approach is essential for middle school students. Particularly when cultural diversity in the classroom is increasing,
the ability to accept others and have healthy social relationships are critical factors for the young adolescent who can be profoundly influenced by his/her peer group.

By using cooperative learning teams in classrooms, we can improve the classroom experience for all children and at the same time increase the kind of cross-racial attraction that is crucial if we are to have a truly integrated society. (Slavin, 1979, p. 387)
REFERENCES


