

COOPERATIVE LEARNING AS A MAINSTREAMING MODEL  
FOR EXCEPTIONAL EDUCATION NEEDS STUDENT

A Seminar Paper  
Presented to  
the Graduate Faculty  
University of Wisconsin - La Crosse

In Partial Fulfillment  
of the Requirements of the Degree of  
Master of Science in Education:  
Special Education

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August 1988



## ABSTRACT

### COOPERATIVE LEARNING AS A MAINSTREAMING MODEL FOR EXCEPTIONAL EDUCATION NEEDS STUDENTS

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Research has shown that when students labeled as handicapped are mainstreamed into regular education classes, there is an increase in social-emotional behaviors and academic success. The purpose of this paper was to study and review research related to cooperative learning as a mainstreaming model for exceptional education needs students. Review of the literature supported cooperative learning settings, compared with competitive and individual settings, as promoting greater interpersonal attraction and academic achievement among students labeled handicapped and nonhandicapped. A model for the implementation of cooperative learning as a mainstreaming method was presented.

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## CHAPTER I

### Introduction

During the 1940s and 1950s, school personnel concerned with providing education for children with serious learning and emotional problems advocated the development of special programs that removed them from regular classrooms. This impetus came from a concern that the needs of these children were not being met and from the observation that they were rejected by their classmates, which was felt to be harmful to their social development and self-concept (Johnson, 1950; Shattuck, 1946). By the 1960s, special classroom placement was the norm for students labeled educable mentally retarded, learning disabled, and emotionally disturbed (Madden & Slavin, 1983a).

Research has shown that academically handicapped students learn better in regular classes with adequate support than they do in self-contained classes (Calhoun & Elliott, 1977; Madden & Slavin, 1983b). The same research also indicates that mainstreaming improves the social-emotional behavior of students. As a result of this research and of changing attitudes toward special education at large in society, many exceptional educational needs (EEN) students are mainstreamed in

regular classes for all or part of their school day. The passage of the Education for All Handicapped Children Act (P.L. 94-142) has further accelerated this trend of integration in regular classes whenever possible. This has led to improvements in social and achievement outcomes for mainstreamed students (Meyers, MacMillan, & Yoshida, 1980).

Despite these positive gains, serious problems remain. Studies of EEN students in regular classes consistently have shown that these students are disliked or rejected by their classmates (Bruininks, 1978; Gottlieb & Leyser, 1981; Siperstein, Bopp, & Bak, 1978). Handicapped students are often perceived by their nonhandicapped peers in negative and prejudiced ways. This interaction may even increase the stereotyping and rejection of, and the prejudice toward, the handicapped student (Gottlieb & Budoff, 1973; Iano, Ayers, Heller, McGettigan, & Walker, 1974; Porter, Ramsey, Tremblay, Iaccobo, & Crawley, 1978). These are the very problems that contributed to the development of segregated special classes more than 30 years ago. The evidence is too strong to suggest going back to non-integrated programs. The question then is,

how can the needs of these children be met in the mainstreamed classroom?

Simply placing EEN students into the regular classroom does not <sup>alone</sup> appear to be enough to build positive relationships between them and their nonhandicapped classmates. Classroom interventions are needed that require handicapped and nonhandicapped students to interact with each other in constructive and positive ways that will facilitate both academic <sup>and</sup> social-emotional growth and progress (Madden & Slavin, 1983). *in the nonhandicapped classroom*

In any classroom, teachers may structure academic lessons (a) individually so that students work by themselves to accomplish learning goals unrelated to those of their classmates, (b) competitively so students work against each other to achieve a goal, or (c) cooperatively so that students work together to accomplish shared goals (Johnson & Johnson, 1986b). Johnson and Johnson (1975) and Johnson (1979) wrote that the way in which instructional goals are structured controls the nature of student-student interaction, and that different student-student interaction patterns lead to different instructional outcomes.

In an individually structured learning situation students' goal attainments are independent; when one student achieves his or her goal, the goal attainment of other students is unaffected (Johnson & Johnson, 1981). In a competitive learning situation, students' goal achievement is negatively correlated; when one student achieves his or her goal, all others with whom he or she is competitively linked fail to achieve their goals (Johnson & Johnson, 1986). In a cooperatively structured situation, students' goal attainments are positively correlated; when one student achieves his or her goal, all others with whom he or she is cooperatively linked achieve their goals (Johnson & Johnson, 1981).

In most schools, class sessions are structured cooperatively only 7% to 20% of the time (Johnson & Johnson, 1983). Johnson and Johnson (1986) propose that cooperative learning should be used whenever teachers want students to learn more, like school better, have higher self-esteem, and learn more effective social skills. The research indicates that classrooms should be dominated by cooperation among students, especially when EEN students are being mainstreamed (Johnson & Johnson, 1983).

The purpose of this paper was to study and review research related to cooperative learning as a mainstreaming model for exceptional educational needs students at the elementary level. Specifically, the paper sought to examine current cooperative learning strategies used in mainstreaming and to develop a viable cooperative learning mainstreaming method that could be embedded in the on going classroom system as a part of the teacher's instructional approach for use with EEN elementary students.

#### Definitions

For the purposes of this paper, important terms are defined as follows:

1. Cooperative learning. Classroom techniques in which students are assigned to small groups and instructed to learn the assigned material or perform a group of tasks. Students discuss and help each other understand the material or tasks, along with offering encouragement and support to help ensure their group accomplishes the objectives of the lesson.

2. Positive goal interdependence. Students perceive that they can reach their learning goals if and only if the other students in the learning group

also reach their goals (Deutsch, 1962; Johnson & Johnson, 1987).

3. Positive reward interdependence. Each member of the group receives the same reward for completing the task (Johnson & Johnson 1987).

4. Positive resource interdependence. Each member has only a portion of the information, resources, or materials necessary for a task to be completed (Johnson & Johnson, 1987).

5. Positive task interdependence. A division of labor is created such that the actions of one group member have to be completed if the next team member is to complete his or her responsibilities (Johnson & Johnson, 1987).

6. Individual accountability. Each group member is responsible for learning the assigned material. The purpose of the learning situation is to maximize the achievement of each individual student. Determining the level of mastery is necessary so that students can provide adequate support and assistance to each other (Johnson, Johnson & Johnson Holubec, 1986).

7. Exceptional educational needs (EEN) students. Students identified through a multidisciplinary team evaluation as significantly deviating from the average

in what they need to succeed in education (Haring, 1978). The EEN category includes among others the diagnostic categories of learning disabled (LD), emotionally disturbed (ED), and educable mentally retarded (EMR). The academic and social-emotional needs of these students may be met by spending all or part of their school day in a resource, self-contained integrated, or total mainstreamed program.

8. Goal interdependence. Individual efforts contribute to a group goal (Johnson & Johnson, 1987; Slavin, 1980a).

9. Interpersonal attraction. Mutual liking and seeking each other out (Johnson & Johnson, 1982).

10. Mainstreaming. Students with academic or behavioral handicaps placed in regular education classes, for part or all of the school day, with or without support from special education services.

## CHAPTER II

### Review of Literature

The ability of students to work collaboratively with others is the cornerstone in the foundation of lasting and stable marriages, families, careers, friendships, and communities (Johnson, Johnson, & Johnson Holubec, 1986). Knowledge and skills are of no use if the student cannot apply them in cooperative interactions with other people. Having the ability to perform technical skills such as reading, speaking, listening, writing, computing, and problem-solving or being trained as an engineer, secretary, carpenter, or teacher are of little value if a person cannot apply their skills in positive, meaningful interactions with other people.

Schools have typically been places where unrealistic expectations of career, family, and community life have been promoted. Most professions do not expect employees to sit in rows and compete with colleagues without interacting with them. Teamwork, communication, effective coordination and division of labor characterize most real-life settings. According to Johnson, Johnson, and Johnson Holubec (1986), it is time for schools to more realistically depict the

reality of adult life. The most logical way to ensure that students master the cooperative skills necessary in most task-oriented situations is to organize the majority of academic learning situations cooperatively. Students can then learn and practice these skills and knowledge in the realistic situation of having to work cooperatively with their classmates.

How students interact with each other depends primarily on the type of interdependence the teacher structures among students' learning goals. In every classroom, instructional activities are aimed at accomplishing goals and are conducted under a goal structure (Johnson & Johnson, 1987). A learning goal is a desired future state of competence or mastery in the subject area being studied. Students' learning goals and objectives may be structured to promote competitive, cooperative or no interdependence among students as they strive to accomplish their learning goals. Goal structures specify the way in which students will interact with each other and the teacher during instruction.

According to Johnson, Johnson, and Johnson Holubec (1986), the way in which teachers structure interdependence among students' learning goals

determines not only how students interact with each other, but largely decides the cognitive and affective outcomes of instruction. They state also, an essential skill all teachers need is knowing how and when to structure students' learning goals competitively. individually or cooperatively.

In a competitive goal structure lessons are arranged so that students work against each other to achieve an objective that only one or a few students can attain. Students are graded on a curve which requires them to work faster and with greater accuracy than their peers. In such competitive situations a negative interdependence is created among goal achievements; students perceive that they can only obtain their goals if their other classmates fail to reach their objective ( Deustch, 1962; Johnson & Johnson, 1987). As a result, students seek an outcome that is personally beneficial, but is detrimental to the others with whom they are competitively joined (Johnson, Johnson, & Johnson Holubec, 1986).

A teacher may also structure lessons individually so that students work by themselves to achieve learning goals unrelated to those of other students (Johnson, Johnson, & Johnson Holubec, 1986). Individual

*Teacher  
Structure  
Lessons*

objectives are assigned each day and students' efforts are evaluated on a fixed set of standards. Every student has a set of materials and proceeds at his or her own speed, ignoring the other students in the class. In an individualistic learning setting, students goal achievements are independent; students perceive that the achievement of their goals is unrelated to what other students do (Deutsch, 1962; Johnson & Johnson, 1987). Whether or not students accomplish their goals has no influence on other students achievements. Consequently, students seek an outcome that is personally beneficial and disregard others' goal achievement.

The third option a teacher may consider is to structure lessons cooperatively so that students work together to accomplish shared goals (Johnson & Johnson, 1987). Students are assigned to small groups, instructed to learn the assigned material and make sure the other members of their group understand and master the subject matter. Individual accountability may be checked by choosing a paper from each group to grade. A criterion-referenced evaluation system is used.

Cooperative learning situations create a positive interdependence among students' goal attainments;

students perceive that they can reach their goals only if the other students within their group also reach their goals (Deutsch, 1962; Johnson & Johnson, 1987). As a result, students seek outcomes that are mutually beneficial to all those with whom they are cooperatively joined. Within a successful cooperative learning group the participants discuss the material with each other, help one another understand it, and encourage each other to work hard (Johnson & Johnson, 1986).

Whether mainstreaming results in constructive or destructive relationships between handicapped and nonhandicapped students is largely determined by the type of interdependence teachers structure among students' learning goals (Johnson & Johnson, 1984). It is this interdependence that defines the social context in which interaction between students labeled EEN and non-EEN takes place. In any learning situation, educators can organize positive goal interdependence (i.e., cooperation), negative goal interdependence (i.e., competition), or no goal interdependence (i.e., individualistic efforts) among students (Johnson & Johnson, 1987). These three types of goal interdependence create different patterns of

interaction among students which, in turn, bring about positive attitudes toward acceptance of classmates, regardless of their handicaps, or negative attitudes toward and rejection of handicapped peers (Johnson & Johnson, 1978, 1983a, 1987; Johnson, Johnson, & Maruyama, 1983).

When handicapped students are first placed in regular education classrooms they may carry social stigma that dominates initial impressions and leads to the formation of static monopolistic stereotypes that overshadow much observed behavior (Johnson & Johnson, 1984). This initial tendency toward the rejection of EEN students is perpetuated by instructing students to work alone so that they will either outperform their peers (competition) or meet set criteria (individualistic efforts).

Johnson and Johnson (1978, 1987) have found that when interaction between handicapped and nonhandicapped students takes place within a context of negative goal interdependence there is a pattern of oppositional interaction. Students (a) have little face-to-face interaction, (b) expect their peers to frustrate the achievement, (c) face peer pressure against achievement and appropriate classroom behavior, (d) communicate

information inaccurately and frequently misunderstand each other, (e) are closed minded and unwilling to be influenced by peers, (f) Give each other negative feedback, and (g) express physical and verbal hostility toward classmates. Students also have experienced perceptions and feelings of (a) distrust for other students, (b) higher fear of failure and more feelings of failure, (c) less mutual concern and feelings of responsibility for peers, and (d) being rejected and disliked by peers.

Negative goal interdependence creates patterns of oppositional interaction and psychological states which, consequently result in monopolistic, static, and often oversimplified impressions of EEN students (Johnson & Johnson, 1984). A direct consequence of competitive experiences is a negative cathexis (Deutsch, 1949, 1962; Johnson & Johnson 1978, 1983a, 1987; Johnson, Johnson, & Maruyama, 1983). The negative value attached to peers' attempts to achieve becomes generalized to them as people (if they "win," you "lose").

Within a context of no goal interdependence, handicapped and nonhandicapped students are instructed to work on their own, not interact with peers, to use

their own materials, and to work toward personal objectives (Johnson & Johnson, 1984). In such a setting there is no interaction among students and no structured interconnectedness. The independence of students during learning activities creates a rigid and overgeneralized attitude toward handicapped classmates by nonhandicapped students. A negative cathexis toward oneself and others is also created.

Johnson and Johnson (1984) stated the process of acceptance during mainstreaming begins with the placement of handicapped and nonhandicapped students in small, heterogenous learning groups and assigning them a lesson to complete as a group, making sure all members master the assigned work. In other words, a positive interdependence is structured among the students' learning goals.

Comparisons of the effects of cooperative, competitive and individualistic learning have shown working cooperatively with peers will create a pattern of promotive interaction ( Johnson & Johnson, 1975, 1978, 1983; Johnson, Johnson, & Maruyama, 1983; Johnson, Maruyama, Johnson, Nelson, & Skon, 1981). Students will experience (a) more direct face-to-face interaction, (b) an expectation that ones' peers will

facilitate ones' learning, (c) more peer pressure toward achievement and appropriate classroom behavior, (d) more reciprocal communication and fewer difficulties in communicating with each other, (e) more actual helping, tutoring, assisting, and general facilitation of one another's learning, (f) more openmindedness to peers and willingness to be influenced by their ideas and information, (g) more positive feedback to and reinforcement of each other, and lastly (h) less verbal and physical hostility towards others.

Johnson and Johnson (1984) found that working cooperatively with peers will create perceptions of (a) higher trust in other students; (b) more mutual concern and friendliness for other students, more feelings of obligation to and responsibility of classmates and a desire to earn their respect; (c) stronger beliefs that one is liked, supported, accepted by others, and that other students care about how much one learns and want to help one learn. Cooperative learning experiences have also been found to create feelings of (a) lower fear of failure and higher psychological safety, (b) higher valuing of classmates, and finally (c) a greater sense of success.

*Impact*

Positive goal interdependence make possible promotive interaction and flexible psychological states (Johnson, & Johnson, 1984). Differentiated and realistic impressions of handicapped classmates by the nonhandicapped are created and result in a positive cathexis towards others and oneself.

The type of goal interdependence used to structure classroom learning determines whether the attitude of heterogeneous students toward each other become more negative or more positive (Johnson, & Johnson, 1986b). The following studies examined the cross-handicap relationships in settings where two or more of these learning experiences, competition, cooperation, and individual efforts were employed.

Cooper, Johnson, Johnson, and Wilderson (1980) compared the effects of cooperative, competitive, and individualistic learning situations on the cross-handicap interaction and relationship of 60 randomly selected junior high school students. Students were randomly assigned to conditions stratifying for sex and handicapping condition. Twelve of the students were labeled either learning disabled (LD) or emotionally disturbed (ED). The students studied for three hours a day in English, science, and

geography classes for 15 instructional days. On a sociometric nominations measure, students indicated more reciprocal cross-handicap helping in the cooperative than in the other two conditions and more cross-handicap friendships in the cooperative than the individualistic condition.

In a study by Armstrong, Johnson, and Balow (1981), 40 fifth- and sixth- grade students were randomly assigned to conditions, stratifying for achievement level (LD or normal progress) and sex. The students participated in either cooperative or individualistic learning situations. Certified, trained teachers were randomly assigned to each condition. The results indicated that greater interpersonal attraction between the LD and nonhandicapped students was evident in the cooperative condition.

Johnson and Johnson (1981a) studied the effect of cooperative and individualistic learning on relationships between students labeled LD and ED and nonhandicapped fourth-grade students. Fifty-one students were assigned to conditions on a stratified random basis controlling for handicap, ability and sex. Students participated in one instructional lesson for 45 minutes a day for 16 instructional days. Teachers

were trained, randomly assigned, and then rotated across conditions. Behavioral measures were taken for cross-handicap interaction within the instructional setting, during daily free-time periods, and during a postexperimental problem-solving situation. A number of attitude measures were also given. There was more cross-handicap interaction during both instructional and free-time situations and more interpersonal attraction between handicapped and nonhandicapped students in the cooperative than in the competitive condition.

Johnson and Johnson (1981b) studied the impact of cooperative and individualistic learning experiences on interpersonal attraction between students labeled LD and ED and nonhandicapped third-grade students. Forty students (eight handicapped) were randomly assigned to conditions stratifying for sex, ability, handicap and peer status. Students participated in a math unit for 25 minutes a day for 16 instructional days. Teachers were trained, randomly assigned, and rotated across conditions. The results indicated that when cooperative learning experiences were compared with individualistic ones, more cross-handicap interaction was promoted during instruction that used cooperative

efforts. The interaction was characterized by involving handicapped students in the learning activities, giving them aid, and encouraging them to achieve. Cooperative learning experiences resulted also in more cross-handicap friendships.

Johnson and Johnson (1982) compared the effects of cooperative and competitive learning experiences on interpersonal attraction between students labeled LD and ED and nonhandicapped fourth-grade students. Fifty-one students were assigned to conditions on a stratified random basis controlling for handicap, ability and sex. The students participated in two instructional lessons for 45 minutes for 15 days. Specially trained teachers were randomly assigned to conditions and then rotated so that each educator taught each condition the same number of days. Cross-handicap interaction during free-time periods and a number of attitudes were measured. The results indicated that cooperative learning experiences, compared to competitive ones, enhanced interpersonal attraction between handicapped and nonhandicapped students.

Smith, Johnson, & Johnson (1982) compared the effects of cooperative and individualistic instruction

on interpersonal attraction between students labeled learning disabled, normal progress, and gifted. Fifty-five students were assigned to conditions randomly stratified for ability and sex. They participated in one instructional lesson for 65 minutes a day for five instructional days. Teachers were trained, randomly assigned, and rotated across conditions. The results indicated that cooperative learning experiences promoted more positive relationships among the three types of students than did individualistic experiences.

Johnson and Johnson (1983) analyzed the effects of cooperative, competitive and individualistic learning experiences on the mainstreaming of fourth-grade students with severe learning and behavioral disabilities. All 59 students (of whom 12 were handicapped) were randomly assigned to conditions stratifying for ability, sex and handicap. One regular teacher and one certified teacher trained for the study were randomly assigned to each condition and then rotated across conditions. The duration of the study was 15 instructional days. Six research assistants observed the cross-handicap interaction in each condition. The results indicated that cooperative

learning experiences fostered more interpersonal attraction between handicapped and nonhandicapped students than did competitive or individualistic ones.

Madden and Slavin (1983) examined the effects of cooperative learning, using heterogeneous learning teams, and individualistic learning experiences on the social acceptance of mainstreamed academically handicapped students. One hundred eighty-three 3rd, 4th, and 6th grade students (40 identified in need of special education services) were randomly assigned to groups stratifying for academic ability. Students participated in a mathematics unit for one 55 minute period each instructional day for seven weeks. Teachers were randomly assigned and rotated in each condition. Results indicated that cooperative techniques improved social acceptance in that rejection of academically handicapped students was decreased, but friendships were not increased. Academic achievement gains and increases in self-esteem were found for the combined sample of students in the cooperative learning treatment. also. ( 114

Johnson and Johnson (1984b) compared the impact of cooperative and individualistic learning on interpersonal attraction between students labeled

learning disabled and emotionally disturbed and non handicapped students. Forty-eight 4th grade students (12 of whom were handicapped) were randomly assigned to conditions stratifying for ability, sex, social class and handicap. Teachers were trained, randomly assigned, and rotated across conditions. Students participated in a social studies unit for 55 minutes a day for 15 instructional days. The results indicated that cooperative learning experiences, compared with individualistic ones, promoted greater interpersonal attraction between handicapped and nonhandicapped students as well as more cross-handicap interaction focused on supporting and regulating efforts to learn and ensure active involvement of all students in the learning tasks.

Johnson and Johnson (1984c) compared the impact of intergroup cooperation and intergroup competition to determine if they promoted systematic differences in interaction patterns and interpersonal attraction between students labeled LD, ED and normal progress. Fifty-one 4th grade students were assigned to conditions on a stratified random basis controlling for handicap and sex. They participated for 55 minutes a day for 10 instructional days. Teachers were trained,

randomly assigned and rotated across conditions. Five research assistants observed verbal interaction on a daily basis in both conditions. The results indicated that intergroup cooperation promoted more inclusion of handicapped students and more cross-handicap relationships.

Slavin (1984) compared the effects of team-assisted individualization (cooperative learning), individualistic and traditional competitive learning experiences on achievement, behavior and social acceptance. Five hundred and four 3rd, 4th and 5th grade students (23% receiving special education services) were randomly assigned to one of the three conditions. The results indicated that the team-assisted individualization program was found to improve the social and academic behavior of the mainstreamed academically handicapped students. Mathematic achievement also increased more than traditional methods. Positive effects on the achievement and behavior of nonhandicapped students were found too.

Yager, Johnson, Johnson and Snider (1985) compared the effects of cooperative, cooperative followed by individualistic and individualistic learning situations

on the interpersonal attraction between nonhandicapped and learning disabled fourth-grade students.

Sixty-nine students were assigned to conditions on a stratified random basis controlling for age, sex and handicap. They participated in a science unit for 45 minutes a day for 54 instructional days. Nonhandicapped peer ratings of social acceptability were obtained at four different times at 18-day intervals. The results indicated that cooperative learning promoted more positive growth in interpersonal attraction, social acceptability and self-esteem between handicapped and nonhandicapped students, than did individualistic learning. When cooperation was replaced by individualistic learning, decay in the relationships between handicapped and nonhandicapped students occurred.

Johnson, Johnson, Scott and Ramolae (1985) compared the effects of single-sex cooperative, mixed-sex cooperative and individualistic learning situations on relationships between fifth-and sixth-grade students labeled learning disabled and nonhandicapped. One hundred fifty-four students were randomly assigned to conditions controlling for ability, sex, grade levels, homeroom and handicap. The

students participated for 45 minutes a day for 21 days during science. Teachers were trained, randomly assigned and rotated across conditions. The results indicated that cooperative learning situations, compared with individualistic ones, promoted more positive cross-handicap relationships.

Mesch, Lew, Johnson and Johnson (1985) compared the effects of working alone or in a group with no academic contingency, working in cooperative learning groups with a group academic contingency, working in cooperative learning groups with social skills training, and working in cooperative learning groups with both academic and social skills contingencies in foreign language and math classes. Five socially withdrawn and isolated students were targeted. The study lasted for over six months with students meeting within their conditions daily for 50 minutes a day in each class. The results indicated that the combined use of academic and social skills contingencies significantly increased the frequency of appropriate social interaction with peers, acceptance and liking by peers, positive attitudes toward the subject area and achievement of socially isolated and withdrawn students.

Cosden, Pearl, and Bryan (1985) compared the effects of cooperative and individual goal structures on students labeled learning disabled and nondisabled. One hundred, thirty-eight children (38 classified as LD) in grades 2 through 8 were randomly assigned to conditions stratified for sex, age and handicap. Grade, subject type and condition had significant effects on performance with LD boys performing more poorly than nondisabled boys on all measures, while only subject type had an impact on the recall measure for the LD girls; no main effects or interactions of study conditions on performance were noted for the girls. Study behaviors for both girls and boys varied as a function of the child's age, study condition and subject type. More questioning, answering and engaging in helping and elaborating was noted in the cooperative learning groups than in the individualistic settings. Satisfaction with one's partner did not vary as a function of the reward structure or type of student.

Johnson, Johnson, Warring and Maruyama (1986) compared the effects of different levels of cooperation on cross-handicap interaction in two studies. In the first study 74 sixth-grade students were randomly assigned to three conditions (cooperative controversy,

cooperative debate, and individualistic) stratifying for ability level, handicap and sex. They participated in the study for 55 minutes for 11 instructional days. In the second study 51 fourth-grade students were randomly assigned to two conditions (intergroup cooperation and intergroup competition) stratifying for sex, handicap and ability level. They participated in the study for 55 minutes a day for 10 instructional days. In both studies the teachers were trained, randomly assigned and rotated across conditions. An Activity Report Scale was given to students to determine who they interacted with in structured class activities, unstructured class activities, school activities outside of class, and activities at home. The results indicated that pure cooperation promoted more frequent cross-handicap interaction than did a mixture of cooperation and competition. Both cooperative conditions promoted more interpersonal interaction than did the individualistic condition. The interaction patterns formed within the cooperative learning settings generalized into unstructured class and school activities.

When students labeled handicapped are mainstreamed into the regular classroom, the primary goal is to

involve them in constructive relationships with nonhandicapped peers (Johnson & Johnson, 1986). This chapter reviewed the classroom learning structures of cooperation, competition and individualism. The consequences of each goal structure as determined by the classroom teacher was discussed in relationship to student-student interaction and the attitudes of nonhandicapped toward handicapped students. Seventeen studies that compared cooperation, competition, and individualistic learning experiences (and combinations there-of) were reviewed. The implications of this research review was discussed in chapter three.

## CHAPTER III

## Interpretation

Mainstreaming begins when an exceptional education needs student walks into the regular classroom and faces his or her new classmates for the first time. While the handicapped child may be feeling apprehensive and fearful, the nonhandicapped children may also be experiencing discomfort and uncertainty. Mainstreaming carries the risk of making relationships between students labeled handicapped and nonhandicapped worse as well as better (Johnson & Johnson, 1986a). It is when EEN students are liked, accepted and chosen as friends that mainstreaming becomes a positive influence on the lives of both handicapped and nonhandicapped students.

According to Johnson and Johnson (1986b) the way student interaction is structured by the teacher determines the amount of support, acceptance and establishment of caring relationships between handicapped and nonhandicapped peers. Mainstreaming handicapped students could be organized in one of three ways: (a) cooperatively creating a positive goal interdependence, (b) competitively establishing a negative goal interdependence and (c)

individualistically with the creation of no goal interdependence (Deutsch, 1962; Johnson & Johnson, 1975).

The results of the research and studies validated the proposition that cooperative learning experiences promoted greater interpersonal attraction between handicapped and nonhandicapped peers than did competitive or individualistic experiences. Cooperative settings, compared with competitive and individualistic settings, resulted in more promotive and less oppositional interaction, greater perceived peer encouragement and acceptance. More accurate perspective taking, greater differentiation of views of others, higher self-esteem based on unconditional self-acceptance, greater academic success, and greater expectations for rewarding future interaction were noted in cooperative settings versus the other more traditional settings.

There has been some concern that the placement of students labeled educably mentally retarded, learning disabled and emotionally disturbed in the regular classroom and in heterogeneous cooperative learning groups would inhibit the achievement of the nonhandicapped students. The results of the studies

reviewed indicated that both handicapped and nonhandicapped students in the cooperative condition tended to achieve at a higher level than did the handicapped and nonhandicapped students in individualistic or competitive conditions.

The results of observation instruments indicated that the interaction between handicapped and nonhandicapped students in the cooperative conditions were characterized by more questions, instructions, encouragements and social statements. Instead of being disruptive to the students, there was more on-task behavior in the cooperative learning groups than in individual or competitive conditions, and also more giving and receiving help between handicapped and nonhandicapped students in the cooperative condition. Students in cooperative conditions as a rule had stronger beliefs that when students work together and help each other learn the academic work is less difficult and that encouragement and support from peers helps academic learning.

These affirmative gains both academically, and even more importantly, socially, increase the positive cathexis or interpersonal attraction among students (Johnson, & Johnson, 1986b). The more promotive the

pattern of interaction between students, and the more students facilitate each other's goal achievement, the greater the resulting interpersonal attraction. Cooperative learning experiences tended to promote the occurrence of these positive variables and resulted in greater interpersonal attraction among students regardless of their heterogeneity.

One point of interest and possible concern to be considered is the Yager, Johnson, Johnson and Snider study (1985) where the decay in the relationships between handicapped and nonhandicapped students occurred when the cooperative learning condition was replaced by the individualistic learning condition. This could indicate that the nature of the relationships that were formed were superficial. Further study investigating the strength and generalizations of interactions and friendships to individual, competitive and free-time situations should be explored.

The study of cooperative, competitive, and individualistic learning structures has been addressed from theory, to the summary of existing knowledge. Cooperative learning has been shown to more aptly meet the needs of all children both academically and

socially. Mainstreaming and desegregation are required by law and are being implemented throughout North America. In the majority of classrooms, however, this integration is being conducted in a highly individualistic or competitive way. Students either compete against each other within the class or work on their own with individualized materials. Both learning experiences provide a minimum of interaction with their classmates.

If one of the goals of our schools is the successful integration and mainstreaming of handicapped children into regular education classrooms, then we must consider other alternatives than the traditional settings which are being utilized now. Cooperative learning is one such alternative with documented success for the improvement of intergroup acceptance, the key to mainstreaming.

## CHAPTER IV

## Implementation

Cooperative learning is important for increasing the quality of life within the classroom, for both handicapped and nonhandicapped students' achievement, critical thinking ability, and long-term academic, emotional and lifetime success (Johnson, Johnson, & Johnson Holubec, 1986). The concept of cooperative learning is simple; but switching a schools' structure from an emphasis on individualistic and competitive learning to classrooms dominated by collaboration is a complex and long-term process.

The transformation from a traditional school structure to a cooperative learning mainstreaming model takes time. The model proposed here builds from an administrative support approach, the backbone of any change within a school, to general inservice on cooperative learning, pilot programs within the school, and finally to overall implementation. The overall time period involved would encompass three years.

Any change within an existing system needs to have strong administrative support. It is the principal who can encourage and reward teachers for working collaboratively and using cooperative learning

procedures. Even more importantly, it is the principal who can make schedule changes so that two teachers can observe each other, co-teach a lesson, and provide in-classroom help and assistance to one another. The principal can also schedule two teachers' preparation periods so that they can plan and evaluate together.

#### Year One

The first step in initiating a cooperative learning mainstreaming mode involves a series of meetings between the principal and the teachers who have expertise in cooperative learning to identify what is happening currently within the building regarding the mainstreaming or non-mainstreaming practices of exceptional education needs students. A viable case needs to be built to justify the implementation of another method. The principal needs to understand the need for and the dynamics of heterogeneous cooperative learning groups. The principal must know what cooperative learning is, and what it is not.

Once the need, interest, and support of the administration have been established, inservice planning may be initiated. It is important to realize that the inservice not be cast in the form of a few day training, then back to the regular classroom to

implement on your own. Instead Johnson and Johnson (1987) recommend spreading the training out over a year with initial training dealing with how to structure heterogeneous groups. Subsequent meetings may be scheduled to deal with how to teach cooperative skills to students, to problem solve any barriers that they may foresee, and to improve collaboration in the team. Some of the important on-the-job functioning is set up in the original inservice, for example, the division of labor on the team. Other aspects can be dealt with in meeting during the year such as continued planning and improving collaborative skills.

An enthusiastic group of staff may not be enough to provide long term change in the school structure. There is constant pressure to go back to doing things in the familiar way and often little support for making change. Therefore the recommendation of Johnson and Johnson (1987) is to start with a small group of volunteers of special education and regular education teachers who have an interest in learning how to structure and implement cooperative learning procedures in their classrooms.

The advantages of starting small in this way are enormous. The participants have the desire to try

something new and in some cases may have already developed good relationships: They are more likely to be people who are more open to change. Starting with a small group of staff and expanding with other staff recruited or expressing an interest is a slower way to affect a whole staff. One must remember basic mainstreaming philosophy of building upon success. An effective beginning is essential to implementing a set of strategies that may take more than a year to integrate into classroom practice so it is a natural part of teaching.

In establishing this mainstreaming model within the core group, it is especially vital that cooperative attitudes be established between special education and regular education educators. It is important that the relationships developed during training continue as the participants share learning and planning in every day school life. The reality, however, is that in the majority of school settings teachers work alone, do their job independently, and perhaps compete in subtle ways. Cooperation in the school setting should be structured and rewarded. This is where involvement and the support of administration is crucial.

Administration should help plan for effective collaboration between regular and special education teachers. If the principal wants collaboration among teachers, he or she should structure it. To be most effective teachers need the same acceptance, support and caring from their colleagues that they create for their students in cooperative learning settings. A principal can structure cooperative goal interdependence in a manner similar to the way that teachers structure student learning goals cooperatively. The special requirements of mainstreaming provide the opportunity to develop day to day collaboration between special educators and regular classroom teachers. The principal can meet with teachers, help them to set mutual goals for successful mainstreaming, and make it clear that it is the teacher-team and not the individuals that will be evaluated. Once teachers begin to work as a team, they can be rewarded with summer writing time, favorable evaluations which are placed in their personnel files, given the time and opportunity as a team to hold inservice sessions within the school, and awarded general approval by administration.

Collaborative relationships must be maintained and time must be set aside for the teacher-team to meet to conduct its work. The principal needs to provide release time for (a) planning and (b) helping team members to develop their skills in working collaboratively with each other in using cooperative learning procedures in the classroom (Johnson & Johnson, 1987). Scheduling may need to be modified to give teachers preparation periods at the same time and to permit them to teach lessons together. This furnishes them with time to observe each other, give feedback and generally work as a team. Principals can also provide necessary materials, moral support, and help in negotiating and solving problems with parents and other staff.

Resource interdependence, to facilitate collaboration, should be encouraged by the team and administration. Whenever a regular classroom teacher has a problem with a special needs student, the principal should arrange a meeting with the appropriate special education teacher, counselor or social worker. In working with regular classroom teachers, the principal should take the position that they do not have to become special education experts, rather that

they only need to use the expertise of other faculty members in the school and district. A capable and astute principal may continually aid teachers in seeing how they can make their own lives easier and do a better job in the classroom by combining their resources with those of other faculty. Many coalitions which could help establish future cooperative learning mainstreaming opportunities may be created by the principal's emphasis on the advantages of combining resources to achieve mutual goals.

Administrative encouragement is also necessary for the successful implementation of cooperative learning. The principal needs to announce support for and describe cooperative learning frequently and concretely at staff meetings and other important occasions. The principal encourages and assists the use of cooperative learning by such activities as providing observations of teachers learning how to use cooperative learning techniques, seeking out teachers to talk about these procedures, and structuring time so that they can observe each other by teaching cooperatively structured lessons and helping each other develop appropriate materials. By structuring these and other activities

he shows by his interest and investment of time that he values and supports the use of cooperative learning.

A final aspect of the principal's role in encouraging teachers to use cooperative learning activities within their classrooms is to reward teachers who do so. Release time, favorable evaluations, viable and public praise, and toleration of early failures are some ways to do this. Structuring cooperative learning activities among staff members will further inspire teachers to use cooperative structured lessons in their classrooms. Finally the principal needs to protect cooperatively learning from any resistance within and outside the school.

The principal should be part of each teacher team. His or her input and support is invaluable to the successful implementation and maintenance of cooperative learning as a mainstreaming model.

#### Year Two

The second year of implementation can be viewed as a time to establish and cement collaborative relationships between participating regular and special education staff. Now that administrative support is in place and inservicing has been completed, various

strategies to build and strengthen relationships between special education and regular education teachers should be structured. Johnson and Johnson (1987) suggest these strategies to include:

1. Maintaining contact. Contact among regular and special education teachers may continue at individualized education plan (IEP) meetings. It is within these meetings that the specific goals and objectives are established with staff and the parents for the student. Specific goal interdependence linking special and regular education may be formed during these meetings. It is essential that both educators assume responsibility for the student and believe that they share responsibility for the plan.

2. Establishing a division of labor. This is a resource interdependence that specifies each teacher's role in the mainstreaming effort. The basic role of the regular classroom teacher is (a) structuring cooperative lessons which place handicapped and nonhandicapped students into the same group, (b) observing students as they work, and (c) identifying any problems in the cognitive and social functioning of all group members. The special education teacher's role is to engage in supportive activities such as:

(a) train all, both handicapped and nonhandicapped students, in the social skills they need to function as a cooperative learning group; (b) give special tutoring to collaborating pairs of students (one handicapped and one nonhandicapped) in how to function effectively in their cooperative learning group and to help each other learn more and behave appropriately; (c) provide the regular classroom teacher with guidelines on how much each mainstreamed student can realistically achieve so that the group scores can be adjusted to encourage maximal achievement and to avoid penalizing nonhandicapped students; and (d) be available for unforeseen problems in building and maintaining accepting and supportive relationships among handicapped and nonhandicapped students.

3. Regular meetings. In order to work together effectively, the regular and special education teachers need to talk regularly to plan their joint teaching activities and evaluate their efforts and achievements. At regularly scheduled meetings, the teachers can discuss each student being mainstreamed, refer the student for further evaluation as warranted, and plan interventions to improve the functioning of the students' cooperative groups. Collaboration takes

planning and it needs to be evaluated. One of the most difficult things to schedule is time for teachers to meet with each other to plan and evaluate their collaborative activities. This is where administrative support and scheduling are important.

Regular and special educators should reap the benefits of their collaboration. They should celebrate their successes, support each other during difficult times, and appreciate each other's efforts to promote more positive and supportive relationships among students and themselves.

### Year Three

The evolution of the use of cooperative learning as a mainstreaming model in a school not only depends on inclusiveness, or having other staff see that the door is open to join in, but is also dependent on the skill of the staff and administration in working with one another. In the third year participating staff have had the opportunity to work with cooperative learning groups in their classrooms and have become comfortable with their ability to set up and run cooperative groups effectively. The teachers also possess the knowlege of their capability to maintain

satisfactory and benifical relationships with each other while using these techniques.

It is at this time that Johnson and Johnson (1987) advocate for the introduction of a set of one-on-one leadership skills aimed at assisting teachers to work with other teachers previously not involved. These strategies may include:

1. Initiating contact in a way that communicates a desire to share ideas without the impression that the teacher experienced with cooperative learning is an expert, or knows all the answers.

2. Planning a lesson together that the two teachers can co-teach in either classroom, and later discuss how things worked together.

3. Planning a lesson together that the new cooperative learning teacher will teach while the other teacher observes and then discuss together afterwards.

4. Development of an observation cycle which allows the teachers time in each other's rooms and builds in time to share ideas on how to improve the use of cooperative learning groups.

5. Continuing to involve other teachers in the process by discussions during staff meetings or in the teacher's lounge.

6. Asking for advice and ideas from all staff and inviting other teachers to observe in their room.

Structuring cooperative learning procedures not only will have an important effect on the mainstreaming of students labeled EEN, but on nonhandicapped children and as an added benefit on teacher morale (Johnson & Johnson, 1986). Structuring a clear cooperative interdependence among teachers has numerous advantages over competitive or individualistic relationships. There is a deep human need to collaborate and build personal relationships with supportive peers. Establishing collaborative and supportive relationships among teachers and administrators may be just as important as building these same relationships among students.

The central question in mainstreaming is, "How will handicapped and nonhandicapped students interact with one another?". Placing students labeled as having exceptional education needs is the beginning of an opportunity, but as all opportunities, it carries certain risks of exaggerating the differences among children rather than underscoring their commonalities. Physical proximity of handicapped and nonhandicapped students does not guarantee positive attitudes and

increased acceptance; increased prejudice and rejection may be the result (Johnson & Johnson, 1986b). The crucial factor in whether a process of acceptance or a process of rejection occurs in the classroom is the kind of student-student interaction fostered by the teacher (Johnson & Johnson, 1986a). Cooperative interactions between handicapped and nonhandicapped students encourage positive social interaction.

Cooperative instruction is based on a set of practical strategies which any teacher can master. It does not require the classroom teacher to become an expert in special education. The model described in this chapter provides a natural way for administrators, regular and special education teachers to work together as a team to facilitate the successful integration of students labeled handicapped into the mainstream.

All students benefit from participating in heterogeneous cooperative learning groups. The considerable research to validate cooperative learning's effectiveness, coupled with clear procedures for administration and teachers to follow, support the proposition that schools modify their teaching practices to bring them in line with what is known about effective instruction and constructive social and

cognitive development (Johnson, Johnson, & Johnson  
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