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# Cooperative Learning: The Teacher's Perspective

Nancy A. Mickunas  
*Lesley University*

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COOPERATIVE LEARNING:  
THE TEACHER'S PERSPECTIVE

Submitted by

NANCY A. MICKUNAS

B. S., BOSTON STATE COLLEGE, 1961

M. Ed., NORTHEASTERN UNIVERSITY, 1971

C. A. G. S., LESLEY COLLEGE, 1987

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**DISSERTATION APPROVAL FORM**

Student's Name: NANCY A. MICKLEWAS

Dissertation Title: COOPERATIVE LEARNING: THE  
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**Approvals**

*In the judgment of the following signatories, this Dissertation meets the academic standards which have been established for the Doctor of Philosophy degree.*

Dissertation Committee Member Rebecca Sherman 4/7/95  
(signature) (date)

Dissertation Committee Member Joseph N. Petner 4/7/95  
(signature) (date)

Dissertation Committee Member Karen A. Gray 4/7/95  
(signature) (date)

Academic Division Dean Margery Miller 4-27-95  
(signature) (date)

## ABSTRACT

This dissertation is an inquiry into what happens when classroom teachers in public schools study and adopt one or more of the cooperative learning models of David and Roger Johnson, Spencer Kagan, and/or Robert Slavin and shift the emphasis of their classrooms from competitive and individualistic to cooperative structures.

Method: A representative sample of eighteen kindergarten through twelfth grade public school teachers from suburbs of Boston were asked to relate their experiences with training and implementation of these cooperative learning models. The goal of this research was to explore both the common and unique experiences of these teachers and to discover whether they experienced significant shifts in their personal philosophies of teaching, teaching practices, and interactions with others in the school community. In these interviews, teachers who were trained in cooperative paradigms told the story of their training, implementation, experiences with others in their school community, and personal reflections. The inquiry was set in the context of school reform movements that explore the ways in which individuals make meaning from both professional and life experiences.

Results: The interviews were analyzed using HyperResearch, a qualitative research computer program. A framework for analysis of the interviews in this study was derived from the literatures of the study of cooperative, competitive, and individualistic paradigms; professional development; and school reform. The teachers in the study were found to be undergoing paradigm shifts on a continuum of change. Training, time, and support from their educational community were factors that appeared to influence the most dynamic shifts in their practice and points of view.

Conclusions: Teachers interpret training they receive in cooperative learning paradigms in ways that are specifically related to their own professional development and their teaching environments. Yet, they experience some common difficulties and successes. Since the adoption of cooperative learning models ultimately influences teachers' cognitive development and necessitates a paradigm shift from competitive and individual structures to cooperative ones, this process is dependent on a long period of commitment and sustained practice. The support teachers receive from their school community and peers facilitates or impedes their implementation and utilization of cooperative paradigms. The larger school and societal context ultimately determines the influence cooperative classrooms will have on students and teachers alike.

Significance: The significance of this study reflects on the need to change current professional development practices. Preservice education of teachers does little to prepare them to take part in developing models of change. Existing staff development trains teachers in new skills but does not address the problem of educating teachers to adopt the philosophy of an alternative paradigm or to model the learned skill with others in the larger educational context. Additionally, this study reflects on the need to educate administrators in the philosophy of the paradigms they expect teachers to adopt and to train them to act as change agents by fostering and assisting a paradigm shift for teachers who are ready.

## ACKNOWLEDGMENTS

"I can't believe that," said Alice.

"Can't you?" the Queen said in a pitying tone. "Try again; draw a long breath, and shut your eyes."

Alice laughed. "There's no use trying," she said; "one can't believe impossible things."

"I dare say you haven't had much practice," said the Queen.

"When I was your age I always did it for a half hour a day. Why, sometimes I've believed as many as six impossible things before breakfast . . ."

From "Through the Looking Glass" by Lewis Carroll

Often a possibility takes form only after one has imagined the impossible. At times, a person must marvel at the accomplishments of others and must rely on their encouragement before envisioning their own ultimate goal. This research has allowed me to study one meaningful area of my own professional practice, while pursuing my dream.

We all have fantasies, but for many people dreams fall by the wayside as they recognize the trials that accompany a difficult journey. For those who have companions walking beside them to offer encouragement, time, and support, the burden of one's pilgrimage is lightened. My sincere thanks goes out to those who have been my faithful companions. You could have given me no greater gift.

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Dr. Joseph N. Petner, Principal, Haggerty School, Cambridge, Massachusetts; Adjunct Faculty, Lesley College.

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## CHAPTER 1

### INTRODUCTION

"Never doubt the ability of one person to profoundly effect the condition of the world . . . indeed it's the only thing that ever has."  
Author unknown

As we approach the twenty-first century almost every segment of society is insisting on educational reform. Society is in desperate trouble and our public schools are being destroyed (Goodlad, 1984; Carnegie Forum on Education and the Economy, 1986; Oakes, 1985; William T. Grant, 1991). Teachers have been required "to carry out late 20th century assignments while locked into a mid-19th century job description" (The Holmes Group, 1986). Too many children are not meeting with success in school; illiteracy rates are high compared to other industrialized nations; segments of the population are left out of the public education process entirely, and schools are not benefiting all students in today's technological society (United States Department of Education, 1991). Furthermore, society has become perplexed about the objectives of schools and unappreciative of their teachers and

administrators. Public schools have been alienated from their communities and overburdened with political and bureaucratic authorities. They have confused accountability with standardized testing. Yet educational reform does not always equate with improvement (Fullan, 1991).

Any meaningful discussion of educational reform must focus on classrooms and interactions within them. Throughout my professional career I have been interested in how teachers encourage students to construct deep understandings of important concepts. In this study, I attempted to explore the experiences and perceptions of some teachers as they shifted the primary focus of their classrooms from more traditional structures that utilized competition and individualization to certain cooperative learning paradigms.

Within this study, I took an in-depth look at what transpired when eighteen suburban public school teachers made substantial changes in their classroom practices. I attempted to capture the essence of how this metamorphosis influenced their views of their students, school communities, and themselves. In the study, I sought to apprehend, through the teachers' own words, the nature and spirit of their underlying beliefs and attitudes. The self-reporting of these teachers was used to examine how the adoption of specific cooperative learning paradigms influenced their outlooks and practices and to describe any transformation of their educational philosophies both in their classrooms and within their institutions.

To frame the dissertation inquiry, this chapter looks at:

- the statement of the problem,
- the background of the study,
- the significance of the problem,
- the context of the inquiry, and
- significant definitions.

The focus of this chapter is the examination of shifting practices of classroom teachers as they adopt cooperative learning models.

### **Statement of the problem.**

I sought to investigate the perspectives of some public school teachers who had mastered and implemented the cooperative learning models of David & Roger Johnson, Spencer Kagan, and/or Robert Slavin and to explore how this change affected and impacted them, their teaching, and their relationships within their school communities. An underlying assumption of this study was that training in and implementation of these cooperative learning models would necessitate paradigm shifts for teachers that might impact their teaching, interactions with others in their schools, and understandings of what, how, and why they teach.

### **Background of the study.**

The philosophic roots of cooperative learning are imbedded in a constructivist's view of the learner in a democratic society.

Constructivism is a theory about knowledge and learning that draws on current work in the fields of cognitive psychology, philosophy, and

anthropology. It defines knowledge as temporary, developmental, socially and culturally mediated, and subjective. Based on a constructivist's viewpoint, the aim of education thereby becomes the development of the learner in knowledge, learning, and self-empowerment. Constructivist learning is the foundation for a number of classroom practices that include: project learning, thematic units, whole language, integrated learning, process writing, teaching to multiple intelligences, authentic learning, performance assessment, and cooperative learning.

The constructivist perspective differs from the romantic school of thought, whereby the goal of education is to provide a felicitous environment for the learner. Additionally, it diverges from the cultural transmission viewpoint, wherein classroom interactions occur largely between the teacher and students and are predetermined by the teacher with a focus on content rather than process. The student is viewed as an empty vessel. By contrast, interactive models, advocated by some teachers, have students interact with their environment, with the teacher, and with other students to optimize their progress according to their own specific cognitive timetables (Kohlberg & Mayer, 1972). The teacher's role thereby becomes facilitative in nature. Cooperative learning paradigms are one focus of this interactive education.

David and Roger Johnson, Spencer Kagan, and Robert Slavin developed cooperative learning/training models that adhere to a common philosophic belief system. The foundation of these paradigms

rests on a set of convictions that:

- all students can learn and be productive;
- students need to develop and value those social skills that are necessary and important for functioning as adults in society;
- student-student interactions mediate learning, facilitate effective interpersonal relationships, and break down barriers between diverse groups;
- there needs to be a balance among cooperative, competitive, and individualistic learning structures used in schools;
- wider use of cooperative learning in classrooms results in increased achievement for students of low, middle, and high ability; and
- teachers who model effective collaboration and cooperation assist and accommodate continuing school improvement efforts that are needed for education in the 21st century.

Some further purposes of cooperative group work are to maximize learning for each student, to increase students' self-esteem, to promote effective student-student and teacher-student interactions, and to develop a sense of student ownership of school/learning issues.

Many of the philosophic underpinnings of these cooperative paradigms have challenged some canons and missions of traditional public schooling by advocating a perspective of equity and equality for all students, regardless of any differences in their personal conditions.

Through an examination of the perspectives of classroom teachers, I investigated and posited whether the teacher in a cooperatively structured classroom truly transforms practice consistent with the cooperative paradigm in its ideal form. I sought to discover whether teacher practitioners translated the philosophy of cooperative learning into practice or merely adopted prescribed classroom techniques. This inquiry raised the question of how the teacher's role changed in a

cooperative classroom, and how any change in the teacher affected the student and the school community, based on the teacher's point of view.

### **Significance of the Problem.**

This attempt to understand the classroom teachers' perspectives informs the school reform issue and its implications for public schools and for teacher preparation. In schools, three distinct structures - competitive, cooperative, and individualistic - exist for students to achieve cognitive and affective goals and to learn the socialization skills needed in society (Deutsch, 1949). There have been numerous quantitative studies of these three paradigms. Research findings indicated that competition predominates in American education, and individualization is also common practice (Kohn, 1986). Although there have been over six hundred experimental studies of public school classrooms incorporating cooperative learning structures, meta-analysis of this research indicates that cooperation only prevails in schools from 7 to 20 percent of the time (Johnson & Johnson, 1985). From these quantitative and empirical studies, there is evidence to indicate that a shift in emphasis from the existing, highly competitive and individualistic school structures to those incorporating cooperation may be beneficial to students academically, social, and affectively (Slavin, 1990).

Teachers have been observed in their classrooms and asked occasionally about their experiences, but seldom have teachers been asked specifically how implementation of certain cooperative learning



models affect them, their workplace, and their students (Goodlad, 1984; Johnson, 1990). Despite research indicating that teachers can and should be influential in effecting educational change, empirical evidence recognizes that teachers are consulted infrequently about how their teaching is influenced and affected by the implementation of models that diverge significantly from more traditionally accepted practices (Johnson, 1990).

An emphasis on cooperative structures represents a shift from the organization of classrooms prevailing when A Place Called School (Goodlad, 1984) and Teachers At Work (Johnson, 1990) reported on schools. Goodlad and Johnson found the schools passive and isolating places for both students and teachers with neither students nor teachers participating in decisions that significantly altered the learning environment. Realignment of time spent in competitive, individualistic, and cooperative learning structures represents a departure from prevailing classroom norms which emphasize competition (Kohn, 1986). This conversion alters classroom functioning. It reflects our current societal need for a more active, decisive, flexible adult workforce.

My study provides an in-depth rendering of the perspectives of some public school teachers who are transforming classrooms that were primarily competitive and individualistic to classrooms employing increased cooperative practices. Reconstruction of any traditional classroom model can be expected to expand the outlooks and perspectives of students, the school community, and the teacher, as

agent of change. It is the perceived outcomes of these shifts, as viewed by these teachers, that this study specifically addresses.

### **Context of the inquiry.**

Cooperative learning is neither new nor an educational fad. The survival of our species, in part, has always depended on cooperation. In ancient times the Talmud stated that in order to learn one must have a partner. From the first century, Quintilian argued that students could benefit from learning from one another. In the late 1600's Comenius believed that all students would gain from teaching and being taught by other students. Cooperation was essential to the one room schoolhouse where children of all ages learned together, often from each other.

Starting in the early 1800's, a movement started that drew upon the experiences of Lancastrian and Common schools. Both Lancastrian and Common schools relied heavily on group learning that required the positive interdependence of group members, individual accountability, and maintenance of effective working relationships. Extensive use of more formal cooperative learning groups was transported to America from England when a Lancastrian school opened in New York City in 1806. Additionally, the Common School Movement continued this emphasis in the early 1800's. John Dewey promoted the use of cooperative learning as part of his project method of instruction and stated that all teaching was training in intelligence and judgment for democratic citizenship (Dewey, 1931, 1958). Thus cooperative learning

has a history in American education, having both strong advocates and periods of wide use over time.

However, an emphasis on interpersonal competition has also been seen in American public schools and continues to be stressed today. The early historical growth of America, with its unlimited opportunities and shortage of labor, created an individualistic culture. The result of an individualistic culture is not necessarily competition. American individualism became competitive and was influenced, in part, by the development of specialized administration in schools and by research into scientific management techniques in industry that began to impact the public education system at the beginning of the 20th century.

### **Influence of industry's scientific management movement on the development of specialized administration in education.**

Prior to 1900 specialized administrations were not needed for schools to function. Then between 1900 and 1930 the scientific management movement that Frederick Taylor brought to industry began to be applied in educational settings (Hoy & Miskel, 1982). Within the industrial model, management identified specific criteria for workers to accomplish in order to maximize production. Soon, schools began to adopt some of industry's standards. Conditions for teachers and methods, curriculum, and assessment for students began to be standardized.

Then, in industry, Henri Fayol took organizational planning one step further than Taylor by streamlining the role of the administrator, who was to direct the energy of the workplace from the top down (Hoy & Miskel, 1982). Luther Gulick amplified Fayol's approach by defining seven functions for which administrators were responsible: planning, organizing, staffing, directing, coordinating, reporting, and budgeting (Hoy & Miskel, 1982). This hierarchical structure was then applied to educational institutions. Within more complex educational institutions, departments were organized that grouped teachers and school personnel according to their major purposes. These divisions were supervised by department heads who functioned in ways similar to middle management in industrial organizations. Patterns constructed to streamline industry exerted a powerful influence on American schools, thus creating a factory model of education.

Concurrent with industry's study of organizational management and its impact on public schools, a large influx of immigrants arrived from Europe in the early 1900's. The flood of children of immigrants who entered public education strained the resources of existing schools and resulted in a changed American educational system whose primary charge was to produce efficient workers for the nation's expanding mass production system. One of the prime motivators for the adoption of industrial pattern in schools was the need for cost containment in burgeoning inner city schools. Efficiency experts claimed they could control the per pupil cost of education services. An influential link with

industrial models of leadership, characterized by top down structures of power, was forged and predominated in American schools. However, due to the overlapping nature of school services, as well as the developmental needs of children, these organizational systems did not suit education as effectively as they did industry. These human engineers and administrative managers overlooked the idiosyncratic nature of employees and the social dynamics of people in differing work places, such as school systems. Even a half century later, cost per pupil economics largely determine many of the services available to students in public schools, leaving an ever widening gap between districts with divergent fiscal resources.

As the trend to pattern the management of schools after industry continued, Max Weber, another efficiency expert, analyzed the bureaucratic structures of schools (Hoy & Miskel, 1982). Weber's theory held that all modern organizations have certain characteristics: a division of labor and specialization; an impersonal organization; a hierarchy of authority, rules and regulations; and a career orientation. Application of these principles, according to Weber, resulted in an organization that promoted efficiency and goal attainment. Weber did not pay attention to unintentional dysfunctional consequences that arose through the use of his model in ever changing educational settings, since the individual needs of students and teachers were not being met.

## **Influence of the human relations movement on industry and schools.**

The classical models of industrial management that had predominated in schools during the early 1900's were challenged as the human relations movement developed in the 1930's. Follett proposed that the "fundamental problem in all organizations was in developing and maintaining dynamic and harmonious relationships" (Hoy & Miskel, 1982, p. 5). Then the Hawthorne project, a major research study on human relations, resulted in the following findings that remain an important influence on organizations today:

- Economic incentives are not the only significant motivators for individuals.
- Workers respond to management as members of informal groups.
- Production levels are limited more by social norms of the informal organization than physiological capacities.
- Specialization does not necessarily create the most efficient organization of the work group.
- Workers use informal organizations to protect themselves against arbitrary management decisions.
- Informal social organizations will interact with management.
- A narrow span of control is not a prerequisite to effective supervision.
- Informal leaders are often as important as formal leaders.
- Individuals are active human beings (Hoy & Miskel, 1982).

These findings clearly are as applicable to educational institutions as to industrial settings.

As part of the human relations movement, McGregor investigated the management styles of administrators and found that two patterns

existed: one being authoritative and coercive and the other being facilitative (Hoy & Miskel, 1982). McGregor's investigations were applied to educational settings by Barnard. In Barnard's study of authority relationships in schools, he concluded that effective administrative relationships in educational settings rely on willing rather than forced compliance (Hoy & Miskel, 1982). He observed that commonly held goals are necessary for cooperative efforts, and that these goals are dependent on communication.

### **Influence of behavioral sciences and theories of human motivation on school settings.**

Around the mid-1900's the behavioral scientist approach began to be felt in school settings. Abraham Maslow, in his study of human motivation, developed a hierarchical theory of human needs that he postulated individuals are motivated to satisfy (Hoy & Miskel, 1982). In ascending order his five levels included: physiological; safety and security; belonging, love, and social activity; esteem; and self-fulfillment needs. According to Maslow, these needs are universal and organized in a hierarchy in which lower level needs must be fulfilled before higher level needs can be activated and pursued. All the scientific management and human relations research that previously occurred had focused on manipulating human beings as one would manipulate objects. They failed to recognize the significance and importance of human needs and motivation.

As American began to shift from an industrial society to an information and service economy, it became clear that workers needed to be able to think creatively and work harmoniously with diverse populations. For schools to succeed, the connection between learning and individual motivation needed to be identified. Learning is a highly complex process that must centrally address the construction of understanding, rather than the mere acquisition of facts and skills. Reform movements evolved to be more responsive to America's changing societal needs. These movements could not legislate outcomes that were not purely mechanical. True reform needed to focus on how students learn and teachers teach. It is the responsibility of the teacher to provide a learning environment where students search for meaning, inquire responsibly, and appreciate uncertainty and diversity. Furthermore, students must understand that they are ultimately responsible for their own learning within the favorable learning environment provided for them. To understand the connection between the individual's motivational needs and cooperative learning, it is necessary to consider the motivational theory research of Lewin and Deutsch and their work on the identification of goal structures.

**The link between the study of human motivation and cooperative learning paradigms.**

Social psychologists Kurt Lewin (1935) and Morton Deutsch (1949) identified and studied goal structures. Lewin researched how



individuals struggle to reach their goals, and theorized that motivation is the key to achievement of goals. In Lewin's theory of motivation, a state of tension within an individual motivates movement toward the accomplishment of desired goals. A goal structure specifies the type of interaction existing among people as they work toward accomplishing their goals.

Building on Lewin's work, Deutsch theorized how goal achievement occurred in the classroom. He conceptualized three types of goal structures: cooperative, competitive, and individualistic. Based on the work of Lewin and Deutsch, several groups of researchers and practitioners sprang up in the United States, Canada, and several other countries. They became convinced that the strongest motivational factors were found in cooperative classrooms. These groups have actively engaged in the study and implementation of cooperative learning lessons, curriculum, strategies, and procedures over the past twenty-five years.

It is important to emphasize that not all group learning is organized cooperative learning as defined in this study. Simply placing students in groups and telling them to work together does not produce significantly higher achievement or other outcomes typically found in formally organized cooperative learning groups. Traditionally grouped students are not ensured equitable participation nor opportunities for success for all group members. Often there are no safeguards for functional division of labor. For example, the more vocal and assertive students participate

more actively, and therefore often learn more, while the more passive students piggyback on the achievement of others. Inappropriate dependence on student or adult authority often exists. When goals are not commonly held, a condition Bernard had determined to be essential in working relationships, motivation to achieve goals is sometimes negatively impacted (Hoy & Miskel, 1982). Without training in appropriate cooperative group processes, a group may fail in many ways.

Since the 1970's, three major paradigms have been developed in the United States to utilize cooperative goal structures and to train teachers in their classroom implementation. These specific structural models were designed by David & Roger Johnson (University of Minnesota), Spencer Kagan (University of California), and Robert Slavin (Johns Hopkins University). Although these cooperative learning advocates adhere to similar philosophic beliefs, they differ in their approaches to classroom practice. The largest difference appears in the direct teaching of social skills. The Johnsons' model includes the direct teaching of social skills; Kagan advocates teaching social skills only when necessary to achieve a goal; and Slavin believes his curriculum is so tightly structured as to make it unnecessary to teach social skills (see Figure 1).

Use of Social Skills Training in Cooperative Learning		
Little direct teaching		Lots of direct teaching
Slavin	Kagan	Johnsons

**Figure 1.** Use of Social Skills Training in Cooperative Learning.

The use of competition is another issue of disparity. Slavin uses intragroup cooperation with intergroup competition in all his models. Although some research has found a tendency for students in Slavin's groups to behave as if intergroup competition does not exist, the Johnsons believe that educators need to reverse the negative effects that intense competition has been shown to have on young people (Johnson et al, 1981, Kohn, 1986). The Johnsons train educators, administrators, and supervisors in models of creative conflict, both to make them aware of how negative effects of competition can be decreased and to teach how competition can be structured under an over-all cooperative "umbrella." In part, this philosophy replicates reports of how the Japanese structured cooperation/competition in the workplace and developed quality circles under the influence of W. Edward Deming (Benedict, 1946). In much the same vein, Kagan advises teachers to use competitive structures only in the spirit of fun with a blanket of cooperative spirit. In No Contest, Kohn used a sports analogy that reflected how athletes work together on their teams to master individual and team skills in a cooperative spirit, even though they eventually

competed with other sports teams (Kohn, 1986). A resurgence in the use of cooperative learning by today's teachers can be attributed to the operationalization of models developed by the Johnsons, Kagan, and Slavin.

**Definitions:**

**Cooperative Learning**--Cooperative learning is an organizational classroom structure whereby students work toward a goal in groups to maximize learning, increase social skills, and enhance self-esteem of group members.

**Goal Structure**--The type of structure that exists among students as they work toward accomplishing a goal. There are three goal structures that may be used during instruction.

**A. Cooperative**--This goal structure exists when students perceive that they can obtain their goal if, and only if, the other students with whom they are working obtain their goals.

**B. Competitive**--This goal structure exists when students perceive that they can obtain their goal if, and only if, the other students with whom they are working fail to obtain their goal.

**C. Individualistic**--This goal structure exists when the achievement of students' learning goals is unrelated to the goal achievement of other students.

**Summary.**

Any attempt to transform practices in today's schools must address how students learn and how teachers teach. But more than that, schools must no longer adopt "flavor of the month" approaches to educational change. According to Joyce (1986), "The real task of school improvement is not just to bring specific innovations into play, but to unite community members, teachers, and administrators in the development of an environment where continuous improvement of education is normal." For transformations to be meaningful, all those charged with the task of educating children must question what, how, and why they teach and the context in which these tasks are performed. They must make connections between what is known in educational research and what paradigm shifts must be undertaken within themselves and in their schools. They must lead the charge in schools rather than be influenced by those outside education who have vested interests in other agendas and who are neither informed about educational practices nor concerned about issues of equity and equality in schools.

Secretary Bennett's report (1988, p. 2) stated that "Extending and applying the lessons of what works - to every school in every community and state in the nation - is the task that lies ahead." According to Bennett, this requires that we strengthen content, ensure equal intellectual opportunity, establish an ethos of achievement, recruit and reward good teachers and principals, and institute reliable measures of accountability.

Goodlad and Keating see that the task demands we develop rich, engaging learning experiences for all student; redress student/teacher and teacher/school relationships; help schools provide equal access to appropriate instruction for all students; and better prepare teachers to take responsibility for constant renewal, to be aware of family and cultural contexts of their students, and to teach those most in need of their help (Goodlad & Keating, 1990). Kozol makes a case for a restructuring of schooling in America, similar to the revamping of the Detroit automobile industry, and further suggests a redistribution of wealth to redress the "savage inequalities" found in American schools. Myles Horton of the Highlander Center asserts that "all education is a form of action based on some kind of social philosophy" (Horton, 1976). For Kohn, in classrooms, as well as in families and business, the destructive influence of intense competition must be counteracted by cooperative activities (Kohn, 1986). Good and Brophy suggest that teachers must teach for understanding and higher-order applications of subject matter; help students understand networks of related information; facilitate problem solving and decision making; engage in collegial interactions; and collaborate to develop appropriate school norms and to determine issues relating to instruction, management, school culture, policy, and community needs of their schools (Good & Brophy, 1991) Ayers believes that in America we have been "so busy operating schools that we have lost sight of learning" and that the action of teachers should be to "tear down walls" for the 21st century (Ayers, 1993).

Current national reports indicate a critical need for teachers to act as change agents in the imperative to restructure schools (Bennett, 1988; Rothman, 1991). I believe that cooperative learning paradigms are one of the vehicles to, in some part, achieve the laudable goals set forth by the previous educators and researchers. There is sufficient research to support claims that these interactive structures increase learning, break down barriers between diverse groups, counteract the competitive focus of American education, aid in appropriate development of students' interpersonal and social skills, and increase students' self-esteem. I believe that extending and applying the lessons of what works in cooperative learning classrooms should be part of our national task in education.

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## CHAPTER 2

### REVIEW OF THE LITERATURE

Interactions among students that develop through the use of cooperative, competitive, and individualistic goal structures in schools have been the subject of more than six hundred research studies. The cognitive and affective outcomes of instruction can be influenced to a large extent by the way in which students interact. It is the teacher who structures the type of interdependence that exists among students as they work toward achieving learning goals.

A goal structure specifies the type of interdependence that occurs among students in classrooms.<sup>1</sup> A cooperative goal structure exists when students work together to accomplish shared learning goals. A competitive goal structure exists when students work against each other to achieve a learning goal that only one, or a few students, can attain. In an individualistic goal structure, students work by themselves to accomplish learning goals unrelated to goals of other students (Lewin, 1935; Deutsch, 1949; Johnson & Johnson, 1987, p. 3-6.)

This study will consider the theory and practical application of the cooperative learning goal structure models of David and Roger Johnson, Spencer Kagan, and Robert Slavin. It will be informed through an

examination of research on cooperative, competitive, and individualistic goal structures and various research paradigms used to investigate these goal structures.

Research examining goal structures is predominately quantitative. Studies that compare cooperation to competition predominate, and there are few studies comparing individualization to either cooperation or competition. Primarily, these studies deal with how goal structures effect students': achievement and cognitive performance, attitude and affective outcomes, and self-esteem. In addition, a number of people have reviewed the literature to develop either a meta-analysis or synthesis of existing studies. Recently, some qualitative studies have begun to appear in the literature. Four areas of research pertaining to goal structures used in schools are related to the present study: (1) meta-analyses of selected quantitative studies that utilize statistical formulas to quantify and make meaning of experiments considering different hypotheses, using varied samples, and generating diverse results; (2) syntheses of selected quantitative studies reporting combined results and providing a narrative organization for findings; (3) newly emerging qualitative studies existing primarily in the form of unpublished doctoral theses; and (4) published articles describing the empirical experiences of teachers and students in classrooms from the viewpoints of teachers who have used cooperative paradigms over an extended period of time.

## **Quantitative Research.**

### **Johnson & Johnson's Research.**

Over the past two decades David and Roger Johnson of the University of Minnesota have been prominent researchers and teachers in the field of cooperative learning. Individually, jointly, and in collaboration with others, they have completed single studies, multiple studies, and meta-analyses of existing research pertaining to goal structures. The Johnsons conducted numerous experiments that considered different hypotheses, looked at various populations, and generated results relating to cognitive and affective outcomes for students involved in cooperative, competitive, and individualistic learning environments.

In the early 1980's, the Johnsons and their colleagues conducted two meta-analyses of some of the existing research on the relationship of goal structures to achievement and productivity. Johnson, Maruyama, Johnson, Nelson, and Skon (1981) reviewed selected research conducted in North America that contained achievement or performance data; and addressed cooperation with and without intergroup competition, interpersonal competition, and/or individualization. These 122 studies yielded 286 findings. Results of this first meta-analysis indicated: (1) cooperative goal structures with and without intergroup competition promote more achievement and productivity than interpersonal competitive goal structures; (2) cooperative goal structures with and without intergroup competition promote more achievement and

productivity than individualistic goal structures; (3) cooperative goal structures without intergroup competition promote higher achievement and productivity than cooperative goal structures with intergroup competition, and; (4) there is no significant difference between interpersonal competitive or individualistic goal structures on achievement and productivity.<sup>2</sup> These researchers indicated that their findings had important practical implications for education and industry, since the overall effects stand as strong evidence for the superiority of cooperation in promoting achievement and productivity.

Another meta-analysis conducted by Johnson, Johnson, and Maruyama (1983) considered the effect of goal structures on interdependence and interpersonal attraction between: (1) ethnically diverse individuals; (2) handicapped and nonhandicapped individuals; and (3) ethnically similar and nonhandicapped individuals.<sup>3</sup> This review included 98 studies and yielded 251 findings. This meta-analysis resulted in three major conclusions:

1. Cooperative experiences without intergroup competition promote more positive relationships among individuals from all three groups than do cooperation with intergroup competition, interpersonal competition, or individualistic experiences.
2. Cooperation with intergroup competition promotes more positive relationships across ethnic and handicap lines and among ethnically similar individuals than do interpersonal competition or individualistic experiences.
3. There appears to be little difference between the impact of interpersonal competition or individualistic efforts on interpersonal attraction.

From the results of these meta-analyses, the researchers further suggest: mediating and moderating variables applicable to goal

structures have yet to be identified; additional work is needed to determine the influences of cooperation versus individualization on students' effectiveness; more research is needed to study cooperation without intergroup competition in comparison to cooperation with intergroup competition; and the comparison of interpersonal competitive goal structures to individualistic structures is the most neglected issue in this area of study.

In summary, the Johnsons and their research colleagues believe their findings have important practical implications for education and industry by providing strong evidence for the superiority of cooperation in promoting achievement, productivity, and better interpersonal relationships, particularly in light of the predominance of interpersonal competition and individualistic work commonly found in education and industry in the United States (Johnson & Johnson, 1987; Goodlad, 1984; Kohn, 1986). They suggest there is considerable generalizability of research findings since conclusions were drawn from numerous studies, conducted on a wide range of research sites, and subjected to rigorous methods of meta-analysis. David and Roger Johnson have developed and continued to refine paradigms of cooperative learning for classroom teaching, for training teachers in both the theory and practical classroom application of their cooperative model, for resolving conflicts in school settings, and for managing effective cooperative schools.

### **Slavin's Research.**

Robert Slavin of Johns Hopkins University has been a prolific researcher of goal structures. In addition to his own experimental studies, Slavin has reviewed and synthesized previous research on classroom practices relating to goal structures, as well as the effects of reward systems on goal structures. The research discussed here was conducted since 1981 and includes a series of studies that: (1) investigate cognitive and affective outcomes of goal structures, considered separately or jointly; (2) synthesize or analyze previous research on goal structures; and (3) operationalize the contact theory of Gordon Allport that focuses on race relations.

Slavin has studied the cognitive and affective outcomes of cooperative, competitive, and individualistic goal structures on students. However, there are additional features of his research that differentiate it from the research of others. Slavin's research has compared the effects of cooperative models that differentially provide:

- no extrinsic reward based on the work of the group,<sup>4</sup>
- individual rewards for students based on their individual performance as a result of their group work,
- group rewards for students based on their group performance on a task, or
- group rewards for students based on their individual performance during intergroup competition.

Although David and Roger Johnson (Johnson et al, 1981) also researched cooperation with and without intergroup competition, this topic was of special interest to Robert Slavin. His Student Team



Learning models offer team rewards based on intergroup competition, a feature not built into the Johnson and Johnson or Kagan cooperative models. Clearly, Slavin has been concerned with documenting the various cognitive and affective outcomes of cooperative, competitive, and individualistic paradigms on students; but, additionally, he has attempted to discern the mediating and moderating variables that differentiate his cooperative model's outcomes from those of other models. The implications of research conducted by Johnson and Johnson in 1981 indicated that further study of mediating and moderating variables was needed (Johnson et al, 1981).

In 1981 Slavin synthesized results of 27 studies that examined academic achievement in cooperative, competitive, and individualized classrooms. He found a significant positive effect on student achievement for students in cooperative classrooms in 19 studies, no difference in 7, and no significant difference in one. Slavin concluded:

- The positive effects of cooperative learning methods on student achievement occur with equal frequency in elementary and secondary schools; in urban, suburban, and rural schools; and in subjects as diverse as mathematics, language arts, social studies, and reading.
- Most studies show high, average, and low achievers gaining equally from cooperative experiences.
- In comparing the achievement of Blacks and Whites in cooperative learning models, while both Blacks and Whites achieved more as a result of cooperative learning as compared to competitive and individualistic models, Blacks achieved significantly more.<sup>5</sup>
- Students who preferred to cooperate to learn did best in cooperative programs, while those who preferred to compete, although they did well in cooperative models, do their best in competitive programs.

- The more tightly structured cooperative methods have the largest effect on basic skills, but more open-ended cooperative methods work better for higher-order cognitive skills.

Slavin indicated that although this evidence is only suggestive, it may be that a mix of cooperative learning methods improves the various kinds of learning that takes place in different subjects and settings.

Slavin's 1983 review considered two separate comparisons. The first part examined achievement effects of 46 experimental studies comparing classrooms using cooperative goal structures to classrooms using competitive or individualistic goal structures. Sixty-three percent of the studies showed cooperative learning methods to have significant positive effect on student achievement; 33% found no differences; and 4% found significantly higher achievement for a group using competitive or individualistic structures.

Slavin had concluded previously, in his 1981 review, that gains in achievement for students were significantly higher when cooperative goal structures were used rather than competitive and individualistic goal structures. The first segment of this 1983 review supported his previous findings. However, some researchers disagreed with Slavin about conditions within cooperative groups that most significantly effect learning (Johnson et al, 1981). So Slavin proposed that achievement may be influenced by the reward structures build into classrooms, as well as by the goal structures, and conducted a second analysis within his 1983 review. Here Slavin looked more closely at experimental studies of cooperative classrooms that considered reward structures as well as

goal structures. He examined achievement results by comparing studies of cooperative classrooms that used group study and rewards awarded to the group or the individual to cooperative classrooms with group study but no rewards. Of these studies, Slavin reported that 89% of the students in cooperative classrooms using group study and rewards scored significantly higher on measures of achievement than students in cooperative classrooms with no rewards. Summing up his results, Slavin concluded that students taught in cooperatively structured classrooms scored significantly higher on measures of achievement than students taught in competitively or individualistically structured classrooms. Additionally, Slavin proposed that evidence exists to suggest that significant effects on achievement in cooperative structures depend on the use of group rewards, regardless of whether the rewards are based on individual learning or group performance.

There are areas of disparity between Slavin's 1983 synthesis and the meta-analysis done by the Johnsons and their colleagues in 1981. The Johnsons' review found students in cooperative groups without intergroup competition to have higher academic achievement. This conclusion is in sharp contrast to Slavin's finding that students involved in group study with intergroup competition fared better. This difference continues to be debated to the present day, as some researchers compare the combined effects of goal and reward structures on student achievement.

When Cotton and Cook (1982) criticized meta-analyses that compared various cognitive and affective outcomes goal structures have on students, they suggested that blanket conclusions indicating cooperation is the most effective over-all goal structure are contradicted in several research studies, and even in some meta-analyses. It was also their contention that generalizations concerning the effectiveness of cooperative, competitive, and individualistic reward structures were neither feasible nor useful. Rather Cotton and Cook posited that more benefit would be derived from research focused in small well-defined areas of some theoretical or practical importance.

The criticisms leveled by Cotton and Cook alerted those reviewing the literature on goal structures to be cautious. Variations between findings reported by the Johnsons and their colleagues and those of Slavin certainly were not to be ignored. Yet while Cotton and Cook pointed out divergent findings in the experimental research examining goal structures, they failed to take into account considerable empirical evidence on classrooms reported by teachers and the overwhelming numbers of experimental studies that indicated various positive benefits for students participating in cooperatively structured classrooms.

Much of the research on goal structures in the 1970's focused on how goal structures influenced students' social interactions and self-esteem. The next decade brought an emphasis on a comparison of students' achievement in various structures. I became convinced that cooperative paradigms showed promise for increasing student

achievement and self-esteem and for fostering positive interpersonal relationships. I felt that research from the previous two decades indicated the need for more study to consider various elements effecting goal structures. Studies that compare discrete differences within various models of cooperation have begun to appear more frequently in the literature of the 1990's. In my opinion, former research on goal structures focused on students to the extent that it denied the importance of interactions between teachers and students in classrooms. Newly emerging qualitative studies have begun to investigate the significance of these interpersonal classroom interactions and the influence they have on students both cognitively and affectively.

In 1985 Slavin reviewed research of instructional methods that operationalized the principal elements of Gordon Allport's contact theory of intergroup relations by structuring cooperative classrooms so as to ensure that all students were granted equal status within their study groups (Allport, 1954). Some of Allport's initial research on attitudinal and affective outcomes in classroom settings grew out of school desegregation attempts that followed the 1954 landmark case of *Brown v. Board of Education* and the 1964 Civil Rights Act. Social scientists debated the potential impact of school desegregation on intergroup relations. Allport evaluated the experience of desegregation in industrial, military, and other nonschool settings in order to anticipate the effects of school desegregation on intergroup relations. Allport's contact theory was based on his findings and has dominated social science inquiry on

race relations ever since. Allport's own summary of the essentials of contact theory is as follows:

Prejudice...may be reduced by equal status contact (although with normally occurring individual differences - author's note) between majority and minority groups in the pursuit of common goals. The effect is greatly enhanced if this contact is sanctioned by institutional supports...and if it is of a sort that leads to the perception of common interests and common humanity between members of the two groups. (Allport, 1954, p. 281)

Allport cited research indicating that superficial contact, competitive contact, and contact between individuals of markedly different status could be detrimental to race relations. The implication for schools was that there should be careful consideration given to the type of group contact afforded children in classrooms.

Slavin's 1985 review supported the previous findings of Gordon Allport on intergroup theory as it applies to race relations. Slavin's synthesis investigated 19 studies employing cooperative learning methods with racially and ethnically mixed learning groups studying material presented by the teacher and rewarded based on the learning of the group as a whole. Various outcomes included: significant gains in the extension of interracial friendships of Whites toward Blacks and no differences in extension of Black friendships toward Whites; reversal of a trend toward ethnic polarization of friendship choices among Anglo, Hispanic, and Black students; and an increase in sustained interethnic friendships over time. Teachers' reports indicated reduced interethnic conflict. Although some initial gains in interracial friendships was noted, these friendships were not sustained over time. In summary, Slavin reports that 16 of 19 studies operationalizing Gordon Allport's contact

theory indicate that when the conditions of contact theory were fulfilled, some aspect of friendship between students of different ethnicities improved. Though gains reported by Slavin appear to have been slight, in the context of the times wherein these studies occurred important strides were made in ethnic and racial relationships in cooperative classrooms.

Next Slavin (1989) reviewed experimental research that compared classrooms using cooperative learning models to classrooms employing traditional methods. Of these 63 studies, 57% found significantly greater achievement in cooperative classrooms than in traditional classes, 41% found no difference, and in one study the traditional group outperformed the cooperative group. Then Slavin, in an attempt to find support for his previous findings (Slavin, 1983), conducted further analysis on specific aspects of cooperative models by comparing cooperative learning models using group goals and individual accountability to other cooperative models. Indeed, Slavin supported his prior conclusion when he found 83% of cooperative learning groups using group study with intergroup competition and individual accountability indicated significant positive achievement effects in contrast to models lacking these two elements. Slavin proposed that greater academic gain can be linked to models where the group task is ***to learn something*** rather than ***do something***. In the task oriented model, participation of less able students was seen as interference rather than help, in Slavin's opinion. Additionally, various significant positive

affective outcomes were reported for students in cooperative groups with intergroup competition and individual accountability:

- Students' rejection of their mainstreamed classmates was decreased significantly .
- Students' self-concepts improved.
- Peer norms in favor of doing well academically emerged.
- Students developed feelings of cooperation, altruism, and individual control over their own fate in school,
- Liking for school increased.
- Students of lower socioeconomic status, and at risk for becoming delinquent, had better attendance, fewer contacts with police, and higher favorable ratings by teachers.
- For emotionally disturbed adolescents in a self-contained school, positive interactions and friendships increased among students in the cooperative group. Students were better behaved and more on-task, and had better attendance.

Then, in 1991, Slavin synthesized existing research on the effects of cooperative learning paradigms on student achievement. Of 69 studies assessing achievement, 61% found significantly greater achievement in cooperative than control classes; 37 % found no difference, and in one study the control group outperformed the experimental group. Consistent with his previous studies (Slavin 1983, 1989), Slavin found that two elements must be present if cooperative learning is to be effective: group goals and individual accountability. His findings indicated that groups must be working to achieve some goal for which they earn rewards or recognition, and that group success must depend on the individual learning of every group member.



In summary, Slavin proposes that research indicates the usefulness of particular cooperative strategies for improving such diverse outcomes as increased achievement, intergroup relations, relationships between mainstreamed and normal-progress students, and self-esteem. It is important to note that noncognitive outcomes appear to be less dependent on any particular goal and incentive structure (Slavin, 1983). Slavin suggests that widespread and growing use of cooperative learning methods indicate that these methods are effective, practical, and attractive to teachers, as well as learners.

For practitioners, the research summarized by Slavin suggests ways of structuring classrooms cooperatively and providing reward incentives to maximize academic and social gains for students. A literature review by Newmann and Thompson (1987) supported Slavin's claims. Yet, controversy surrounded Slavin's research in the divergent findings of the Johnsons and their colleagues in 1981, the criticism of Cotton and Cook in 1982, and still further disagreement by Kohn in 1991. The Johnsons and their colleagues (1981) found significant positive gains in achievement for students in cooperative groups without reward structures. The argument of Cotton and Cook (1982) revolved around contradictory findings of the meta-analyses and syntheses conducted by leading researchers of goal structures. Kohn (1991) held that extrinsic rewards undermine intrinsic interest and that effective alternatives to the use of group rewards exist. Graves (1991), commenting on the controversy between Slavin and Kohn over intrinsic and extrinsic

rewards, pointed out that many of their differences are merely a matter of where they stand on a pragmatic and idealistic continuum. He asserted that while both Slavin and Kohn share a vision of education as the development of intellectual curiosity, creativity, and problem-solving, they are in sharp contrast as to methods to achieve their vision. Graves concluded that contrasting viewpoints of researchers in the field of goal structures sharpens our awareness of implications of instructional practices and assists practitioners by helping them focus on the complexities and variety of forms daily educational practice can take.

Consistent with his research, Slavin developed and refined a variety of cooperative classroom models to accommodate various school settings and communities, trained teachers in the use of his models, and generated and encouraged school-wide models of cooperation for educational systems. What remains to identify definitively are the mediating and moderating variables yielding the greatest gains in different settings (Johnson et al, 1981, 1987; Slavin, 1981, 1990).

### **Research by Others.**

Starting in the 1980's research began to consider students' perceptions of their involvement in cooperative classrooms. Morgan's quantitative study (1987) involved teachers and students in grades two through ten in Anchorage, Alaska. Morgan used survey instruments to determine if students' perception of classroom life and their social integration differed between classrooms where cooperative learning was

structured for 30% or more of the time versus classrooms where it was structured less than 30% of the time. Morgan concluded that in classrooms where teachers used cooperative learning strategies for 30% or more of class time students had a more positive view of classroom life and that their achievement scores reflected more growth than scores of student in low use classrooms. There were no significant differences reported for social integration.

Then, Newmann and Thompson (1987) summarized research that compared the achievement of students in grades seven through twelve in classrooms using one of five major cooperative learning paradigms with achievement of students in traditionally taught classes. The investigation reviewed twenty-seven experimental studies implementing Student Teams-Achievement Divisions (Slavin, 1978), Teams-Games-Tournament (DeVries & Slavin, 1978), Jigsaw (Aronson, 1978), Learning Together (Johnson & Johnson, 1975), or Group Investigation (Sharan & Sharan, 1976).<sup>6</sup> Twenty-five studies (68%) favored a cooperative approach. Of the five techniques, Student Teams-Achievement Divisions was found to be the most consistently successful (89%) and Jigsaw the least (17%). Teams-Games-Tournament (75%), Learning Together (73%), and Group Investigation (67%) all showed high success rates, as compared to traditionally structured classrooms. The researchers' interpretive remarks indicated that more research is needed in most subjects and with most techniques, especially in grades ten through twelve. They further indicated that future studies should focus on the

interactive effects of method, level of thought, student background, and student status within groups.

Bursheim (1993) quantitatively examined the relationship between productive organizations and cooperative learning environments in order to explore school and faculty characteristics for their effect on dimensions of productive school work culture and cooperative school environment practices and values. This study involved kindergarten through sixth grade teachers and principals of eighteen elementary schools in Minnesota, Colorado, and Pennsylvania. Bursheim used two survey instruments, one developed by Dr. Karolyn Snyder in 1988 and another developed for the study by the researcher, in collaboration with Dr. Roger Johnson. These instruments rated faculty perceptions of what occurred in their schools. This investigation resulted in several recommendations:

- Some of the participating schools should use study data as baseline information to assess long-range plans for becoming more cooperative, productive school cultures.
- Schools and school districts should make long-term commitments to focused, systemic changes that address alignment of espoused beliefs, values, and principles with their underlying structures, practices, priorities, and cultures.
- There is a need for more action research on how to recognize, assess, adjust, and celebrate indicators of progress toward cooperative, learning communities.

### **Qualitative Research.**

Although the Johnsons, Kagan, Slavin, and other proponents of cooperative learning report experimentally reliable gains for students in particular cooperative learning classrooms when compared to students in competitively and individualistically structured classrooms, we know

little about the experiences of students or teachers in cooperative classrooms. Only a few researchers have sought out their viewpoints and these studies have been primarily quantitative.

There has been a recent focus on qualitative study of cooperatively organized classrooms, but currently much of this information remains as unpublished doctoral dissertations or journal articles based on teachers' experiences. In an article published in 1987, Smith reported students' perceptions of life in a cooperative learning classroom. Smith's article used the words of his students to highlight some of the social skills and self-esteem issues that he felt had surfaced in a decade of effective cooperative practice in his classroom.

Scanlan (1988), in a published action research study, used an ethnographic approach to examine the patterns of student talk in cooperative learning groups. She employed both teacher and student interviews, as well as audio tapes and observations. Scanlan concluded that the teacher's beliefs about learning and teaching, her own sense of professionalism, and her district's commitment to long-term staff development provided a social context facilitating the use of cooperative groups in classrooms and the students' use of language to collaborate and to learn in cooperative groups.

In 1990 two qualitative research studies considered staff concerns in cooperative classrooms. Sandeen examined the implementation of cooperative learning in three California school districts to draw implications for staff development practices. Teachers trained in the

Johnson & Johnson cooperative learning model were observed and interviewed. Findings indicated a consistent implementation pattern. While teachers reported strong academic achievement for students, they expressed concerns about administrative understanding and the need for parent education. Then Tyrrell (1990) summarized results from a questionnaire surveying Ohio teachers trained in cooperative learning. These teachers:

- adopted cooperative models for a variety of reasons,
- validated the research that attributes increased learning to cooperative structures,
- noted increased self-esteem in their students,
- saw students utilize aggression in a more positive manner,
- reported peer pressure to improve academic performance,
- stated that students said they liked school better, and
- communicated different levels of administrative and community support for their use of cooperative learning.

Two 1992 studies considered students in cooperative settings. Michalsky (1992) observed cooperative classrooms in order to develop an instrument for use by supervisors, principals, or peers to assist the cooperative learning teacher. He developed a five-year plan to use this instrument with implementation procedures that included: training; additional consultation and reinforcement; monitoring; and external communication for administrative and teaching staff with other constituent groups. Unfortunately, Michalsky missed the opportunity to ask teachers specifically what would benefit them in their cooperative classrooms.

Another variation in research on cooperation came when Jones (1992) examined competitive and cooperative learning from the learners' points of view. This researcher relied on student interviews to obtain the students' perspective of cooperative versus competitive classrooms and concluded that from their points of view, the role of the teacher is to focus students on knowledge in such a way that it makes sense from the learners' perspectives. Again the teachers' perspectives were not elicited.

In 1993 Kastelic investigated teachers' perceptions regarding congruence between teaching the cooperative learning model in the classroom and the management practices of the school. This case study employed the Johnson and Johnson cooperative learning model and compared one school site managed in a traditional top-down model with another using a site-based management approach. Findings indicated that all the teachers valued cooperation and cooperative learning. However, while teachers at the traditionally managed school presented a technical and precise cooperative model, those at the site-based managed school employed a more constructivist approach.<sup>7</sup> Schools implemented classroom models in a manner similar to the way in which the management level perceived cooperative skills. How schools adapted cooperative models related more to the management of the site than to the original philosophic objectives of the models.

Then King investigated whether the application of Slavin's cooperative learning model was effective after teachers received three

in-service education workshops. The workshops included theory, demonstration, practice under simulated conditions, structured feedback, and coaching. Teachers were partnered with peers during the operationalization of the model in classrooms. Students and their teachers were interviewed to obtain their perceptions of their educational experience with cooperative learning in the classroom. The research found that these workshops appeared to foster the idea of classroom-level research by encouraging teachers to do empirical inquiry on how to operationalize a new teaching strategy in instructional units that they would develop and teach immediately in their classes. Workshop variables were identified that contributed to the in-service education experiences for teachers: common professional interest, hands-on experiences, accountability, differentiation from other group work, climate of the school, voluntary participation, involvement in the research process, the content, complexity of the model, distribution of training, and coaching (King, 1993).

### **Summary.**

Although qualitative studies of cooperative classrooms are beginning to appear in the literature, they are few. A focus of research on cooperation is grounded in an assumption that classroom learning results from a student's interactions with both peers and teacher. While the qualitative studies I have just examined investigate cooperative learning in classrooms, they do not focus in any depth on teachers'



interactions with students or these teachers' perceptions of cooperative paradigms.

Some current research recommends further study in this area. Bursheim's study (1993) indicated that future research needs to address the relationship between productive organizations and cooperative learning environments. Kastelic (1993) recommended additional investigation of teachers' perceptions regarding the adherence of cooperative learning programs to the original objectives of the models, after finding that implementation of cooperative learning models was adapted more to the management style of the particular school than to the philosophic objectives of the cooperative paradigm. Furthermore, researchers have not asked teachers directly what facilitates or hinders their implementation of cooperative learning paradigms.

I believe that the adoption of cooperative learning models requires a change in the way teachers view classroom, peer, and community interactions. With the impact of educational reform, many schools are facing a transformation from models of behaviorism to constructivism in an effort to prepare students for the twenty-first century. For some educators this may involve dramatic cognitive and affective paradigm shifts. Further study of teachers' insights into their cooperative classrooms and their interactions within their school communities, which has hitherto been neglected, may contribute significant new information to our knowledge of cooperative learning models. These proposed

investigations are consistent with current school reform agenda issues that focus on school-based management.

## Chapter 2 Endnotes

<sup>1</sup>Note: Student interactions may be characterized as positive, negative, or neutral.

<sup>2</sup>Note: Research on individualistic goal structures is sparse, which may account for this finding.

<sup>3</sup>Note: Handicapped is a term used in the literature of the early 80's.

<sup>4</sup>Note: The issue of intrinsic and extrinsic rewards has been the subject of heated debate in the pages of Educational Leadership.

<sup>5</sup>Note: At the time of this study the term African-American was not in use.

<sup>6</sup>Note: Elliott Aronson developed the original Jigsaw model. Robert Slavin later developed a Jigsaw II technique, based on the original Jigsaw, but adapted for use with various narrative forms.

<sup>7</sup>Note: The Constructivist view of learning involves students working on activities embedded with problem-solving. Constructivist value schools that support project, authentic, integrated, and problem-based learning; performance assessment; process writing; whole language; thematic units; cooperative learning; and multiple intelligences.

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## CHAPTER 3

### THE DESIGN AND METHODOLOGY OF THE STUDY

This chapter describes the approach used to investigate and determine the broad dimensions of the perspectives of respondents in this study. In the discussion to follow, I will address the purpose, research design, sample, setting, recruitment, protection of human subjects, data gathering, data analysis, and methods of this research.

#### **Purpose.**

The purpose of this study was to investigate the perspectives of some public school teachers who had studied and implemented the cooperative learning models of David & Roger Johnson, Spencer Kagan, and/or Robert Slavin. I will also explore how this change has affected and impacted their teaching and their relationship with their school communities. An underlying assumption of this study is that training in and implementation of these cooperative learning models may necessitate paradigm shifts for these teachers that impact their teaching,

interactions with others in their schools and communities, and understandings of what and how to teach, as well as why they teach.

### **Selection of Method.**

This inquiry is one piece of research adding to empirical evidence that there is some variation in how teachers respond to training designed to adapt classroom practices. The cumulative life experiences of adults who have grown, developed, matured, and become teachers shape their perspectives. The professional experiences of adults who have trained, interned, and taught in specific educational environments influence the degree to which their outlooks differ. The diverse learning styles adults bring to continuing training impact their perceptions. Teachers trained in cooperative learning models may be affected by a complex set of interactions that impact their interpretation of the training. These parameters will be used to ground the research design for this inquiry.

### **Research Design.**

Smith proposes that "the purpose of any research project is to answer the research question in terms of findings framed in the context of the particular method of inquiry" (Smith, 1989, p. 3). Consequently, the method chosen must reflect the focus of the research. The qualitative researcher inductively determines the social practices of people who function holistically within an imbedded context. Of qualitative evaluation methods Patton says, "The fundamental principle of qualitative



interviewing is to provide a framework within which respondents can express their own understanding in their own terms" (Patton, 1980, p. 205). Educational settings require that we view particular segments of scholastic life in relation to the total environment. To do so means "viewing the parts in the light of the whole, or insisting that a certain phenomenon or subject matter must be interpreted as a whole and not piecemeal" (Lacey, 1982, p. 97). Adopting a grounded theory approach permits exploration of the concept without allowing preconceived ideas of the researcher to influence subjects' responses. According to Glaser and Strauss, "Generating a theory from data means that most hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research" (Glaser and Strauss, 1967, p. 5-6). For this research, a grounded theory approach was used to investigate the transfer of training in a specific educational paradigms to educational practice. I chose naturalistic research, with inductive analysis leading to deductive analysis and theory building, for the above stated reasons (Glaser & Strauss, 1967; Strauss, 1987).

This research will identify and describe variations in understanding and implementation of cooperative learning models of David and Roger Johnson, Spencer Kagan, and Robert Slavin by some teachers who were trained in and are using these models in their public school classrooms. In this inquiry, I will propose some typologies that describe how teachers approaching training from different mind sets. These typologies will not be considered developmental in nature but

rather stemming from each individual's idiosyncratic history.

Understandings garnered from this inquiry may reflect a snapshot in time for these specific teachers in a discrete segment of their professional lives.

### **Philosophic Framework of Research.**

Some framework must accompany all naturalistic inquiry. When the researcher is concerned with overriding social processes, and not with every unit of analysis, grounded theory is appropriate and particularly useful to investigate previously unresearched areas (Patton, 1980). This provides a new point of view in familiar situations since the purpose of naturalistic inquiry is to explain action, within a given social context, by generating theoretical constructs (Patton, 1980). Lincoln and Guba (1985) list and describe implicit characteristics of research conducted through naturalistic inquiry. For the purpose of this discussion, the following characteristics, as described by Lincoln and Guba, have been separated into three distinct categories:

#### **Multiple Realities.**

- Inductive data analysis is more likely to uncover multiple realities and fully describe the setting and interaction of influences on the respondent.
- Qualitative methods are more adaptable to multiple realities as well as more sensitive to assessing value, pattern, and influence.
- For a research design to adequately account for the multiple realities it must be constructed so that it is not completely contextually bound.
- It is through case study reporting that the multiple realities of a specific site can be captured.

*Regarding the above characteristics identified by Lincoln and Guba (1985), little research has been done that investigates teachers' perceptions about their implementation of cooperative learning models in classrooms. These relatively few studies do not reflect the varied realities experienced by teachers. It is the intent of this study to promote further investigation of and interest in teachers' perceptions of the impact their training in cooperative learning paradigms has had on their classrooms and educational communities.*

*A precedent for this approach to educational settings exists in Susan Moore Johnson's Teachers At Work (1990) which investigated teachers' perceptions of their workplaces. Similarly, Kastelic (1993) studied the congruence between teaching the cooperative learning model in the classroom and the management practices of the school.*

### **Naturalistic Methodology.**

- Naturalistic inquiry utilizes tacit knowledge to validate the intuitive knowledge of the researcher and the expressed knowledge of the subject and account for all levels of information.
- Naturalistic inquiry follows a pattern of sampling which is linked to the study of the phenomenon rather than randomly selected.
- Naturalistic research allows theory to emerge from data rather than from a preconceived theory, thereby providing a better match of theory to context.
- Naturalistic researchers carry out studies in settings or contexts in which the event for study naturally occurs, in the belief that context is crucial to finding meaning and that events are a product of interaction and can not be separated from their environments.

*Here Lincoln and Guba (1985) stress a view of research that is not value bound. Rather, the aim of this form of research is to develop a set of generalizations specific to the nature of the setting and imbedded with rich description. Here both researcher and subjects are influenced by*

*their interaction with such mutuality that cause and effect are impossible to distinguish.*

*In A Place Called School (1984) John Goodlad reported on public education as seen through the eyes of teachers, students, and parents. This rendering provided a rich, vivid picture of classrooms in American public schools.*

*One study (Morgan, 1987) of some classrooms in grades two through ten in Anchorage, Alaska, compared students' perceptions of classroom life when cooperative learning was structured more of the time versus classrooms where it was structured less. An intent of my study is to promote further interest and investigations into teachers' perceptions regarding cooperative learning models being implemented in public schools.*

### **Nature and Limitations of Naturalistic Research.**

- Differences in the procedures and premises of naturalistic research, as distinct from quantitative research, require that unique measures and criteria be used to ensure its trustworthiness.
- The nature of localized findings from a particular set of interacting circumstances restricts any broad application of theory.
- The focus of the emerging inquiry determines the boundaries for the study.
- Human subjects are adaptable to situations and can participate in and evaluate meaning-making.
- It is from human sources of data that meanings and interpretations can be constructed in the hope that their reality can be captured.
- There is a greater likelihood of interpreting data in terms of specific cases rather than from hypotheses.

*The above nature and limitations of naturalistic research indicated by Lincoln and Guba (1985) make its use more suitable for studies within a holistic setting. Since implementation of innovative program models is*

*a continuing practice within the field of education, naturalistic studies ideally compliment the voluminous quantitative research already in existence today.*

*Bursheim (1993) identified the need to conduct action research on how to recognize, assess, adjust, and celebrate "indicators" of progress toward cooperative learning communities. In Jones' (1992) ethnographic study of two classrooms, one competitively structured and one cooperatively structured, he compared the experiences of the students from the learners' points of view.*

*Goodlad (1984) sought to ensure the trustworthiness of this form of research through use of an expansive sample in his study. Similarly, in No Contest, Alfie Kohn's (1986) description of competitively structured classrooms was based on extensive holistic classroom study.*

*It is the intent of this researcher to add to the body of knowledge that describes the cooperative classroom in public schools. It is my hope that this will inform the educational community about the place cooperative learning deserves in the ever changing schools of the future.*

### **Process.**

Glaser and Strauss (1967) posit that the process inherent in grounded theory demands the constant comparison of incidents within specific categories drawn from prior experiences. Categorical coding is integrated simultaneously with comparison of all preceding events. Throughout this continuum data is reduced and theory evolves, serving not only as a means of data processing but to facilitate theory development.

Lincoln and Guba (1985) state that interviews are recorded, transcribed, and read by the researcher to identify patterns. Through the

review of interview transcripts, bits of data and units of meaning are perceived by the researcher. These data bits must be capable of standing on their own merit without requiring explanation beyond the knowledge of the context of the study. Additionally, this data must focus on the understandings sought by the researcher.

For the purpose of this study, I utilized HyperResearch (Researchware, 1991-1993). Data bits from interview transcripts were kept on computer files within the HyperResearch system for labeling, indexing, filing, sorting, and retrieving my field notes, documents, and interview transcripts. Use of this computer program facilitated the coding of information for inclusion in multiple areas. According to Lincoln and Guba (1985), a data bit may be listed by an analytical, episodic, methodological, organizational, site, source, type and/or other code group for later retrieval. Categories began to emerge from these units of data. Original assignment of data to categories was easily corrected in subsequent review. If not originally captured, it might have been lost forever (Lincoln & Guba, 1985).

HyperResearch is a new research form which uses the computer to implement a process suggested by Glaser & Strauss (1967). This process, through which a researcher is able to develop descriptive and explanatory categories, requires that the researcher compare an incident selected for coding with previous incidents. Categories used by the researcher to describe an event or process are descriptive. Those assigned in an effort to explain situations are explanatory.

HyperResearch permits the researcher to review previously categorized incidents checking for consistency and using theoretical memos to document inconsistencies. Further computer processing insures that material reconsidered for inclusion within categories will match appropriately the properties or guidelines set up by the researcher. At the same time, material may be deleted from categories. Realignment of data within categories may result in new categories being established or some categories being assimilated into others. Since data collection is still in progress, gaps in theory may be filled through collection of more data. The researcher's memos document ideas about the data, codes, categories, and relationships. These memos serve to summarize categorical information, to develop a set of operational definitions, and to suggest thematic integration of categories into clusters. Patton (1980) pointed out that this process moves the researcher to a conceptual level, easing the way for the researcher to relate information to other theoretical constructs. HyperResearch makes this process more efficient. Also, data managed in this form can be replicated more accurately by other researchers.

As data is streamlined using HyperResearch, categories become saturated and a core of categories emerges. It is this analytical process that allows the researcher to account for patterns of behavior in the area of study, and to integrate established and defined categories. This permits the researcher to develop themes which interrelate within the study's context and with themes in other research (Patton, 1980). Thus,

the search for information leads to the discovery of overarching themes that define and explain the data (Patton, 1980). The result of this process is a set of relational statements discovered and developed through a complex analysis of original, authentic data (Lincoln & Guba, 1985).

### **Sampling.**

The subjects for this study were 18 female public school teachers from eight middle class schools in Boston suburbs (See Appendix VI, p. 180). Eight primary, eight middle school, and two high school teachers were interviewed, as described in Table 1. They taught for periods of from eight to thirty-one years, as indicated in Table 2. The primary school teachers taught all subjects. The middle and high school teachers taught a variety of subjects including English, foreign languages, mathematics, spelling, vocabulary development, social studies, and science. One high school teacher was a special educator who co-taught classes with a mainstream teacher.

The sample population for this study was derived from cooperative learning support and networking groups available to the researcher. Lists of trained cooperative learning teachers indicated that the number of teachers trained at each grade level decreased as the grade level taught increased. The lists were heavily weighted with elementary school teachers, with fewer teachers representing middle schools, and still fewer at the high school level. One hundred three teachers were sent letters that described the study and were asked to participate



TABLE 1  
 INDICATES ORIGINAL SAMPLING DISTRIBUTION OF CURRENT  
 GRADE LEVEL TAUGHT AND NUMBER OF TEACHERS IN  
 PRIMARY, MIDDLE, AND SECONDARY SCHOOL CATEGORIES

GRADE LEVELS	NUMBER OF TEACHERS PER GRADE	NUMBER OF TEACHERS PER CATEGORY
<u>K-4</u>		8
K	1	
1	1	
2	2	
3	4	
4	0	
<u>5-8</u>		8
5	2	
6	2	
7	2.5	
8	1.5	
<u>9-12</u>		2
9	.5	
10	.5	
11	.5	
12	.5	

\*DECIMAL VALUES INDICATE PROPORTION OF TEACHER TIME AT EACH GRADE LEVEL

TABLE 2  
 INDICATES ORIGINAL SAMPLING DISTRIBUTION OF RESPONDENTS'  
 YEARS OF TEACHING EXPERIENCE AND CUMULATIVE YEARS OF  
 TEACHING EXPERIENCE FOR PRIMARY, MIDDLE,  
 AND HIGH SCHOOL TEACHERS

TEACHER	LEVEL	YEARS OF TEACHING
1	MIDDLE	14
2	MIDDLE	31
3	MIDDLE	10
4	PRIMARY	25
5	MIDDLE	22
6	PRIMARY	12
7	PRIMARY	18
8	PRIMARY	24
9	PRIMARY	11
10	MIDDLE	8
11	MIDDLE	20
12	HIGH	20
13	PRIMARY	21
14	PRIMARY	23
15	HIGH	22
16	PRIMARY	25
17	MIDDLE	17
18	MIDDLE	27

SUMMARY BY CATEGORY OF YEARS TEACHING

TOTAL	PRIMARY	159
TOTAL	MIDDLE	149
TOTAL	HIGH	42

or contact the researcher for additional information (See Appendix II, p. 176). After some initial requests for further information, two teachers refused, eighteen agreed, and several teachers stated that they would participate at a later date if additional participants were needed in the fall (See Appendix III, p. 177). The remainder of the teachers contacted failed to respond. Of the trained cooperative learning teachers on the list, ten were male and ninety-three were female. Female teachers dominated the elementary school list. Few males were represented on the middle school list. Male teachers were primarily at the upper grade levels. No male teachers agreed to be interviewed for this research project. All respondents who agreed to participate were asked to read a letter explaining the research project and its proposed use and then to sign it. This procedure follows guidelines set by the American Psychological Association in regard to research conducted with human subjects (See Appendix IV, p. 178).

### **Research Schedule.**

The research design was approved by my committee in early January, 1994. The committee notified Lesley's PhD. Program administration of my intentions and research design. I piloted the interview format in January and February. The committee agreed that the interview schedule format was too restrictive to provide the rich, descriptive material that would be needed for this study. I revised the

interview format to reflect an oral history perspective. This interview format was approved by my committee.

Teachers were contacted and were interviewed at places and times convenient for them. The committee reconvened late in April, 1994 to review the data obtained from initial interviews and to ensure that an understanding of teacher's perspectives could be obtained through this avenue. It was decided that I should continue with the present format, continue analysis, and meet with a HyperResearch consultant. Interviewing began in March and continued through July, 1994. At this time I determined that data analysis categories were becoming saturated and new information obtained was becoming redundant.

### **Data Gathering and Analysis.**

Informal conversational interviews were selected over interview guides or standardized open-ended interviews after the pilot study (January - February, 1994) indicated that this vehicle provided richer source material (See Appendix I, p. 174). Using an initial prompt (See Appendix V, p. 179), teachers were requested to relate their experiences with cooperative learning, beginning with their initial training and implementation, and to provide details and examples that would help others understand their journey.

Interviews were conducted over a three month period from March, 1994 to July, 1994 and ranged from forty-five minutes to one hour and fifteen minutes in length. Contingent probes drawn from the pre-study

were kept at hand anticipating that some teachers might experience difficulty during the interview. Each interview was tape recorded and transcribed within thirty-six hours of the interview. I recorded my field notes and impressions immediately following each interview and transcribed them within twenty-four hours. All transcriptions were transferred to HyperResearch, the computer program for qualitative analysis of research data. The first teacher was interviewed and my notes were coded. As subsequent interviews and memos were coded, additional codes were added and previous codes revised.

HyperResearch facilitated the comparison of newly coded interviews with previously coded material. Initial analysis began immediately and categories began to emerge. Codes were in a constant state of revision and recoding. As codes and categories were added and revised, themes began to emerge. I continually recoded and revised data from interviews and memos. I regularly tested interview data placed within codes for appropriateness and made adjustments. When material obtained from interviews in progress became too repetitive and yielded no new codes, categories, or themes, I decided to limit the number of interviews to eighteen. During the continuing data processing and analysis, I developed major themes from initial themes and identified areas for further study.

This pattern for analysis of data follows suggested steps recommended for naturalistic research: (1) inductive analysis leading to (2) deductive analysis and (3) theory building (Glaser & Strauss, 1967;

Strauss, 1987). The process differentiates this study as naturalistic. The approach imbeds the research in the field of grounded study (Patton, 1980).

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Teacher Interview #1, interviewed by author, tape recorded, Hanover, Massachusetts, March 1, 1994.

Teacher Interview #2, interviewed by author, tape recorded, Hanover, Massachusetts, March 8, 1994.

Teacher Interview #3, interviewed by author, tape recorded, Winchester, Massachusetts, March 22, 1994.

Teacher Interview #4, interviewed by author, tape recorded, Weymouth, Massachusetts, March 29, 1994.

Teacher Interview #5, interviewed by author, tape recorded, Canton, Massachusetts, April 1, 1994.

Teacher Interview #6, interviewed by author, tape recorded, Weymouth, Massachusetts, April 6, 1994.

Teacher Interview #7, interviewed by author, tape recorded, Weymouth, Massachusetts, April 12, 1994.

Teacher Interview #8, interviewed by author, tape recorded, Weymouth, Massachusetts, April 12, 1994.

Teacher Interview #9, interviewed by author, tape recorded, Hanover, Massachusetts, May 2, 1994.

Teacher Interview #10, interviewed by author, tape recorded, Medfield, Massachusetts, May 10, 1994.

Teacher Interview #11, interviewed by author, tape recorded, Medfield, Massachusetts, May 10, 1994.

Teacher Interview #12, interviewed by author, tape recorded, Northboro, Massachusetts, May 21, 1994.

Teacher Interview #13, interviewed by author, tape recorded, Weymouth, Massachusetts, June 2, 1994.

Teacher Interview #14, interviewed by author, tape recorded, Cohasset, Massachusetts, June 6, 1994.

Teacher Interview #15, interviewed by author, tape recorded, Brockton, Massachusetts, June 15, 1994.



Teacher Interview #16, interviewed by author, tape recorded, Plymouth, Massachusetts, June 22, 1994.

Teacher Interview #17, interviewed by author, tape recorded, Weymouth, Massachusetts, June 28, 1994.

Teacher Interview #18, interviewed by author, tape recorded, Weymouth, Massachusetts, July, 19, 1994.

## CHAPTER 4

### RESEARCH FINDINGS

This research study investigated the perspectives of eighteen public school teachers who had studied and implemented the cooperative learning models of David and Roger Johnson, Spencer Kagan, and/or Robert Slavin. These teachers responded to a request to participate in interviews extended to cooperative learning support and networking groups available to the researcher. The sample included kindergarten through twelfth grade teachers from schools in suburbs of Boston. The teachers in this study, through the process of interview, reflected on personal and professional experiences related to their adoption of these specific cooperative paradigms. Through their oral histories, I learned about the details of their journeys. These teachers shared insights into cognitive or affective shifts they perceived in their professional practice and relationships with others in their educational community. This chapter reports the research findings of this study, the researcher's interpretations and recommendations, and implications of

the study's results for classroom teachers and school systems adopting cooperative learning paradigms.

Analysis of the data resulted in four overarching themes. In the interviews, these teachers discussed their cooperative learning training experiences. They spoke as well about ways in which the cooperative paradigm effected their classrooms and classroom practices. They also related their interactions with others in their educational communities as they negotiated some shifts in classroom practices. These teachers contemplated the impact their internal and external struggles had on them personally.

This group of educators committed themselves to making personal and professional changes, in part, by implementing and increasing their use of cooperative learning models. They endeavored to prepare themselves for the challenges of teaching students in the twenty-first century by becoming dynamic models for children.

No teacher in this study sought to establish a totally cooperative classroom, but rather to increase the amount of time students worked cooperatively and to teach them skills needed to participate successfully in cooperative learning groups. All teachers continued to use competitive and individualistic structures but attempted to expand their use of cooperative classroom structures. Research findings indicate that cooperative structures are appropriate for classroom use for up to sixty percent of class time (Johnson, Johnson, & Holubec, 1988). However, in John Goodlad's extensive study of schools, he indicated that cooperative

structures are used for less than seven percent of class time (Goodlad, 1984). The pervasiveness of competitive activities in schools mirrors "an American cultural addiction" to competition, according to Strick (Strick, 1978). Similarly, Kohn argued that the American focus on competition in classrooms, families, athletics, and businesses is inherently destructive (Kohn, 1986).

This study captured these teachers' professional journeys. This group of teachers talked about a specific transitional phase of their public school teaching experiences from their own perspectives. Research conducted in this manner takes on a unique form that does not match neatly the tradition of standardized inquiries into education practice. Other contemporary researchers of educational practice, who have used some qualitative methodology, report facing this challenge as well (Kastelic, 1993; Scanlan, 1988). Since oral history represents subjective experiences, analysis becomes a highly complex process. Throughout this chapter, analysis of the data is presented in standard print, while any research discussion, interpretation, recommendations, or implications for future study appear in italics.

### **These teachers contemplated change.**

Each year teachers face decisions about how much or how little they are willing to change to keep their classrooms dynamic and contemporary. The teachers in this study cited numerous reasons for making substantial and fundamental changes in their classroom

practices that included increased use of cooperative learning strategies. They recognized specific difficulties within their classrooms and resolved to do something about them. They saw change encouraged or mandated in their systems. Sometimes, these teachers felt uneasy about themselves or their teaching practices. Their rationale for change was similar over levels and disciplines. The following representation presents the cumulative general impressions and aims, in regard to change, of these eighteen teachers, as analyzed from their interviews:

**What teachers recognized about their classrooms**

They recognized that children of today are different than children were years ago. "I wanted to enter the world of the twenty-first century and take my kids with me." (Interview 7)

They felt that the range of children's skills in classrooms was wider than they previously encountered. "I had two children who were nonreaders and this very bright student." (interview 8)

They were disappointed in students' test scores. "There were so many kids who failed all the time." (Interview 7)

They encountered students with low self-esteem. "Students' self-esteem was a huge issue." (Interview 4)

They reported apathy among students. "I hated walking into the classroom. I knew that however charged up I would be about what we were doing, I would be the only one who was going to be excited about it." (Interview 5)

They saw that students had different learning styles and talents. "There is a wide range of representative ideas among even young children." (Interview 14)

**What they wanted to do about it**

They wanted to meet the needs of today's children.

They wanted to be able to teach all children in their classrooms appropriately.

They wanted to raise students' academic achievement levels as shown on tests.

They hoped to raise students' feelings of self-worth.

They wanted their students to take some ownership for their own learning.

They wanted to reach students through their unique learning styles and talents.

They were involved in inclusion classes without having been trained to deal with them. "They would chose not to participate. I hated to think of what would happen to them." (Interview 10)

They wanted to develop strategies to deal with inclusion models in their classrooms.

They believed that peers have great influence on each other in classrooms. "Communication and interaction with each other brings out a lot of positive things a teacher might not notice otherwise." (Interview 6)

They wanted to use peer influence productively in classrooms.

They saw intolerance for differences among children. "Assume nothing. They need a lot of help. Tolerating each other is a whole new experience." (Interview 16)

They hoped to help children respect other people's differences.

They encountered children with poor problem solving skills. "They would come to me and say 'What are you going to do about it?' " (Interview 13)

They sought ways to teach problem solving.

They believed students had poor interpersonal skills. "If I saw a problem, I separated them. You had to be careful who worked with whom. Then I realized I was missing something." (Interview 13)

They wanted to improve students' social skills.

They felt gifted and talented students were not being challenged. "I believe the students themselves were taking the easy way out." (Interview 15)

They wanted to provide more opportunities for gifted and talented students to exercise options in the classroom.

### **What teachers recognized about their systems**

### **What they wanted to do about it**

They received a message that change was being expected in their systems. "I know that in my evaluation cooperative learning was looked on as a positive thing." (Interview 1)

They selected cooperative learning from a number of alternatives.

They were influenced by an administrator to try cooperative learning. "I was prodded into it while I was looking for a change." (Interview 3)

They sought to cooperate with their administrator.

They experienced more collaboration in their school-based management teams. "Some teachers are charged with planning for specific changes at their level or within their department." (Interview 12)

They selected cooperative learning as a tool for interacting with others in their school environment.

They saw that cooperative learning was being adopted system-wide. "It didn't start with me. Team Assisted Individualization was in place before I came." (Interview 3)

They saw cooperative learning as the buzz word of the 90's. "Active learning and problem solving are the big thing, and cooperative learning is the buzz word." (Interview 17)

They identified discrepancies between the curriculum and skills children need to become effective adults in society. "When kids become adults it's not going to be all about worksheets. They are going to need to work with different kinds of people." (Interview 8)

They heard teachers talking about cooperative learning. "Once one person started and was successful, everybody started talking about it." (Interview 18)

### **What teachers recognized about themselves**

They experienced frustration with what had been occurring in their classrooms. "I was deeply dissatisfied about what was happening in my classroom, and I didn't like feeling that way." (Interview 2)

They recognized the value of risk taking. "So many students, if they don't know the right answer, do not want to take that risk." (Interview 17)

They recognized that their teaching approaches were fairly static. "I think I always felt I had to be in charge - moving things along, doing something, speaking, wasting no time." (Interview 5)

They read that industry was looking for people who can work in groups. "I've read in different articles that businesses are looking for people who can work in groups toward a common goal." (Interview 1)

They were exposed to cooperative learning in a college course. "I started experimenting with cooperative learning the year I started my Master's program." (Interview 10)

They followed the mandates of their system to attend training.

They wanted to be able to converse about cooperative learning in an informed manner.

They wanted to make more effective matches between curriculum and skills children need.

They wanted to see for themselves what cooperative learning involved.

### **What they wanted to do about it**

They wanted to regain their sense of well being.

They wanted to increase their own ability, and that of their students, to take risks .

They wanted to vary their teaching approaches.

They felt obligated to do something to facilitate work in classroom groups.

They sought to learn more about cooperative learning.

<p>They felt the research on and/or theory behind cooperative learning left an impression on them. "After reading more of the research on cooperative learning in science, I was determined to try it." (Interview 11)</p>	<p>They wanted to see if cooperative learning could have a positive effect on students' achievement and interpersonal skills in their classrooms.</p>
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<p>They felt burnt out using the whole class model. "People who were strong believers in the old methods were yelling at kids and putting them down Kids just couldn't do what these people expected of them." (Interview 7)</p>	<p>They sought to try alternative approaches.</p>
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### **Classroom management styles of these teachers before the use of cooperative learning.**

After recounting the reasons that prompted their decisions to investigate new structures, these teachers began talking specifically about their classroom management styles before the implementation of cooperative learning. A true split in approaches surfaced here. Prior to being trained in cooperative paradigms, teachers reported either that they had run a traditional style classroom, making little or no effort to use group learning strategies of any kind, or that they gravitated toward a variety of group learning experiences for children. There appeared to be no middle ground for this sample of teachers. Those who taught middle and high school students leaned toward traditionally styled classrooms. Typifying the view of upper level teachers one person stated, "I always felt I had to be in charge of the class -- moving it along, speaking, doing something." (Interview 5) Teachers of younger children reported having led classrooms with a group focus. As another teacher reported, "I



always had projects, sharing time, a lot of centers, and things like that. I know now that is not really cooperative learning, but that was many years ago and things were different." (Interview 7)

Traditionally oriented classrooms were described as having rows of chairs, didactic teaching, little opportunity for students to make decisions, and a quiet and disciplined atmosphere. Group oriented classrooms were described as having random arrangements of chairs, many project centers, higher noise levels, and flexible atmospheres. Both groups of teachers indicated that, although they knew little about the structure of other classrooms, they based their decisions on some inner sense that theirs was the way classrooms at similar levels should be organized. When asked whether they had visited other classrooms firsthand to test out their theories, all teachers responded they had not. The only knowledge they had of other classrooms came from fleeting conversations with friends who were also teachers and, occasionally, colleagues. Teachers responding in this study universally reported that time to connect with colleagues during the school day is virtually nonexistent.

*Within this study, conversations about classrooms without a cooperative focus supported findings from Goodlad's study of schools a full decade ago. A Place Called School described isolated classrooms, much like separate empires (Goodlad, 1984). For most of the teachers in this study, the isolation of their classroom provided them with some shelter during the first few years they were developing their skills with*

*cooperative learning models. Yet soon they began to long to make connections with other faculty members. They expressed resentment toward administrators who intruded on classes when students were engaged in cooperative activities, fearing that they would understand neither the intent nor philosophy of structural changes in their classrooms. The isolation teachers had at first cherished began to be resented. Teachers longed to tear down walls, to invite others in, to visit teachers who were struggling with the same issues, and to converse with knowledgeable educational leaders.*

*The implication of these three year transitions is that once teachers became at ease with cooperation within their own classrooms, the idea of working individually or competitively became distasteful to them. They had attempted to teach the children cooperative skills and discovered that the organization of their schools lent itself to individualistic or competitive paradigms. These teachers had no desire to turn back. Working in cooperative isolation, they recognized their ludicrous position. Cooperation in the classroom will ultimately yield the greatest success when the classroom is imbedded in a cooperative school system.*

**These teachers reflected on their classrooms before using cooperative learning.**

Although these teachers reported two different ways of organizing their classrooms prior to adopting cooperative learning, they related

similar problematic experiences within their classrooms. For them, school had become overloaded with paper work and provided little opportunity to know their students well, motivate reluctant children, or reach students at the lower or upper ends of the classroom range. As one person I interviewed aptly put it, "You, as the teacher, have to ultimately decide whether that student who doesn't do anything is worth your effort, if each student is entitled to that effort. You have to weigh what is important." (Interview 10) In the past when they attempted to teach students at the extremes of the spectrum, these teachers often felt they were neglecting "average" students too. "The other students were learning anyway or getting the attention they needed," related the teacher in interview nine. They spent too much time teaching concepts previously presented to increasing numbers of students who failed to understand and retained these concepts. As this teacher saw it, "They would flunk or chose not to participate." (Interview 10) Larger class sizes created unwieldy classrooms. These teachers began to doubt their effectiveness when they saw greater numbers of their students with low self-esteem, poor school performance, and an inability to take educational risks. As educators, a strong motivating force propelled them toward changes because of what they observed and sensed within their classrooms.

Overwhelmingly, these teachers talked about their prior reluctance to make substantial changes in classrooms where they felt, at least, in control. Yet they experienced, with an equal intensity, an internal fear of

failure. The turning point for these teachers hinged on a deep inner frustration that built up over time, due, in some measure, to a sense that change was necessary in order for teachers to prepare children for future roles in society. Over and over, these respondents spoke about a need to transform themselves, if any transformation was to take place in their students. They emphasized their responsibility to provide appropriate role models for children within their classrooms. They felt the need to model the idea that learning is a lifetime process for everyone.

### **Training in cooperative learning models:**

#### **The nature of the training.**

This group of teachers reported that their training sessions involved them in cooperative tasks and were designed to model for teachers the experiences of student groups. These teachers discussed both the ways trainers taught and the ways they learned.

First, teachers discussed cooperative learning trainers. Two well known trainers stood out for eleven of the eighteen teachers. Educators who came from a wide geographic area identified the same two superior trainers by name. These presenters were singled out by people who had, on their own initiative, taken thirty hour courses that were highly recommended to them or that were encouraged by school systems offering teachers incentives for participating in training. These effective trainers connected theory to classroom practice, provided ample

references to books and articles, and helped teachers develop cooperative learning materials for their own classroom use.

There were definite differences between teachers' perceptions of the quality of in-service training sessions and the courses they described outside their systems, even considering individual differences among the teachers interviewed. After completing mandated in-services workshop programs sometimes teachers felt they needed additional sessions, or experiences with a different trainer, before they could implement cooperative learning in their classrooms. Two different in-service cooperative learning trainers were openly criticized. They presented too much material in too short a time and gave teachers few strategies that related to their actual classroom needs, these teachers reported. Not one of the eighteen teachers in the study reported receiving any cooperative learning training in their pre-service programs.

### **Insiders as trainers.**

During the interviews, a unique situation emerged relating to training. One teacher I interviewed taught and provided cooperative learning training in the Slavin model that was mandated within her system. I also interviewed teachers trained by an administrator from their system who had previously been a teacher in the same system. Cooperative learning training was voluntary, but incentives were provided by the town to encourage teachers to participate. This situation allowed me to explore the alternate viewpoints of a trainer and trainees

within systems that provided cooperative learning training for their own school district. I was able to gain insights into interactions occurring between classroom teachers and members of their school system who favored the adoption of cooperative paradigms. I was further able to compare these reactions to teachers' responses to cooperative learning trainers from outside their systems.

**Mandatory training provided by a teacher in the system.**

The teacher who trained staff in her system had formerly established goals and objectives for her own classroom and had achieved them through increased use of cooperative learning strategies. Her commitment to cooperative learning was self-initiated. Now she saw her role as more difficult, since she was dealing with peers who were oppositional, in part because they perceived change being forced on them.

This school system adopted a Slavin curriculum package and planned for full implementation within a three year period. After the Johns Hopkins staff provided some initial training in the system, a series of mandatory workshops were scheduled, as shifts to the Slavin curriculum and classroom structure took place at specific levels or within departments. The teacher, as trainer within the system, felt her role provided a useful service to participants. She worked within the system, knew the curriculum, knew what administrators wanted, used the Slavin program in her classes, and had the opportunity to do follow-up with

participants after the training sessions. But this teacher-trainer found herself looking at the problem of school change from both the teachers' and a trainer's perspective in an administratively mandated professional development program, as she taught people who had been colleagues of hers for years. She reported that the experience of training left her somewhat discouraged and made her long for an opportunity to be among peers equally amenable to change. She reported seeing, "... a teaching profession with too many teachers clinging to rote learning paradigms and whole class patterns of teaching." (Interview 5)

Philosophically, this trainer, and teacher, noted a discrepancy between the aims of cooperative learning paradigms and the compulsory training model.

*In field notes from this interview, I recorded that this teacher felt isolated in this newly developed role; while, at the same time, she provided connections for many others. In some ways, this teacher appeared to be feeling a sense of loss for the connectedness she had experienced in her own prior training experiences. Although I did not have the opportunity to interview any teachers who participated in the training described above, it was clear to me from my interview with this teacher-trainer that the compulsory aspect of the program negatively influenced teachers' attitudes. These teachers saw training as another mandate from central office administrators. Future research might well focus on the new roles of teachers who assume responsibilities as*

*teacher-trainers or mentor teachers in the up-coming wave of educational reform.*

**Voluntary training provided by an administrator in the system and supported by incentives.**

A group of teachers in this study was trained by an administrator who previously taught in the same town. This presenter provided voluntary training in the Johnson and Johnson model. The school system offered an incentive, credit towards a step raise, for taking the course. Although this course was not mandatory, it provided the same supports of networking and follow-up that the formerly mentioned town-wide training included. Eleven teachers interviewed from this system reported that they felt tremendous support from the central office, although they admitted that not all teachers and administrators favored this type of program.

Within this structure, the volunteer and incentive nature of the program were key factors in its acceptance, since, without exception, this group of teachers spoke highly of both the structure of the training sessions and the expertise of the trainer. Clearly, the competency of the trainer may have influenced these teachers. However, the analysis of interviews in this study indicated some support for King's finding, in a 1993 study of in-service education of teachers in Slavin's cooperative model, that one of the elements of successful trainings was voluntary participation of the trainees. The teachers of this town felt they had a



network available to them, albeit one they reported did not provide sufficient time for all their needs. Two of the teachers in this study stayed on their personal time to make connections with colleagues, which they stated was a first for them in their teaching careers, because of their family commitments.

*Although the scope of this study was limited to the comments of these teachers, it provided some insights into the cooperative learning training they received. None of the teachers in this study received any pre-service training in cooperative learning. Since the roles of classroom teachers are constantly changing, pre-service programs may need to take the lead in introducing prospective teachers to a variety of educational paradigms for classroom use, including cooperative learning. Additionally, the diametrically opposed ratings these teachers gave to outside training courses and in-service workshop programs of short duration may indicate a need for follow-up studies to determine appropriate training vehicles for cooperative learning models. The results of this limited study indicate the need for longer training periods with follow-up that assesses teachers' understandings of what has been presented. The voluntary or mandatory nature of training programs may be an additional area for future research. Clearly, the role and nature of cooperative learning training on the pre-service, in-service, and professional development training levels need to be more accurately identified and defined.*

*Diverse training experiences surfaced in this study. Certified cooperative learning trainers, with insider understandings of their systems, appeared to elicit significantly different reactions among participants in training. The research summary of Knox in 1981, related to adult learning, considered the holistic character of an individual's life, the developmental processes that occur during transitions, and the factors that enable adults to gain greater insight into their lives. He recognized that people are influenced by major historical events. In a society experiencing rapid change, Knox saw the need for those in helping professions to encourage initiative and self-sufficiency and to act as knowledge brokers and change agents. His research set the stage for schools to developmentally support teachers who, in turn, change the dynamics of school cultures and provide strong role models for children. Interestingly, the dynamics created when school systems mandate teacher training, and set up conditions for change within specific parameters, may negatively influence the participants. Conversely, through voluntary participation supported by incentives, school systems may prime the pump, so to speak, to initiate change and to encourage the self-sufficiency of teachers. In my opinion, the conditions set forth in this latter model afford a better match for the goals and objectives of cooperative learning paradigms.*

### **The nature of the learner.**

Another aspect of training mentioned by respondents was their own nature as a learner. One teacher felt unsure of herself even after completing a cooperative learning workshop, but she attributed her insecurity to her own inexperience with using groups in the classroom. Another revealed, "Sometimes I don't get something the first time I hear it and sometimes not even the second time. Often it's the third exposure that does it." (Interview 8) "I was overwhelmed with things that we were supposed to be doing," said one teacher. (Interview 10) Another teacher reported that although she "saw merit in the aims of cooperative paradigms," she initially doubted, "*she* could implement or tolerate changes that the shift would require." (Interview 12) Returning to the classroom, one person said of herself, "I'm not sure how I can make *that* work in here." (Interview 16) "If I could find a system using a lot of cooperative learning, I would like to ask 'Can I observe? What do you do?' " teacher number three explained.

*I believe that the consistency of these responses establishes a need for support at the classroom level. It seemed that these responses came less from pessimism related to the efficacy of the cooperative learning models than from teachers' insecurities and fear of change itself. Beyond training, the concerns of these teachers highlight the need for networking, administrative supports, and incentives. In all the cooperative learning literature related to the models of Johnson and Johnson, Kagan, and Slavin, time for the individual teacher to adjust is a*

*significant factor relating to implementation. In my own training for the Johnson and Johnson model, I remember hearing David Johnson, Roger Johnson, and Edythe Johnson Holubec all caution that it took about three years for teachers to become totally comfortable with their own classroom implementation.*

A group of teachers talked about themselves as learners from a completely different vantage point. "When I walked in, I was thrilled to death to hear her say the things I believed in. I never knew anyone would say it's okay. I'd actually have some techniques to learn and use." (Interview 7) "This course reaffirmed what I was doing all along. Now I had a more formal way of doing things," reported one teacher. (Interview 13) In the same vein another person claimed, "It is so logical that you could teach yourself to do it." (Interview 15) *Clearly, a cooperative outlook and philosophic disposition toward change positively influenced the training of these participants and gave them courage to apply new structures in their classrooms.*

## **Implementation:**

### **Which model?**

In the first year of implementation, teachers used the cooperative model in which they were originally trained. However, few teachers stayed true to one cooperative paradigm. They expressed an immediate and compelling desire to learn more about other models, as if their initial exposure whet their appetites for more. Although the teachers in this

study began with a course, workshop, or in-service program that focused on Johnson & Johnson, Kagan, or Slavin, some teachers took several alternative courses before they could feel comfortable enough to begin. All respondents ultimately had exposure to mixed models through in-service presentations in their systems or professional development workshops they attended. Two of the teachers interviewed limited themselves to a particular model adopted by their school system. For the rest, if they stayed true to a particular model, it was for a brief period of time when they initially began to use cooperative learning groups.

Cooperative learning was the "buzzword of the nineties" according to the people interviewed in this study. They discussed among themselves the different elements of various cooperative models in teachers' rooms and workshops everywhere. They learned about several cooperative models through follow-ups to their initial training experiences. They swapped lessons, materials, and strategies with their friends. Soon these teachers made so many adaptations of the learned cooperative paradigms that their memories blurred when talking about what strategies matched what model. "Which one of them had the pickle people?" asked the teacher in interview ten. At first, I was confused by this question addressed to me. After probing, I recognized that this teacher remembered how much of Kagan's purchased material bears a logo of a character in the shape of a jelly bean. The mixed jelly beans are analogous to the mixing of children in classrooms. Over time, this teacher did not remember that the characters were actually jelly bean

people and began to call them pickle people. Although she couldn't recall the model's name, she did know that the strategies she liked belonged to that particular paradigm. This teacher indicated that she understood the philosophic differences among the leading developers of cooperative learning models, but that once she had chosen which model she preferred, and the elements she chose to use, the details of the material's logo and names associated with the models held no significance for her. *I thought how self-empowered these teachers appeared with their eclectic approaches, indicating they had not only "learned" about cooperative learning but made adaptations appropriate to their own personal styles and operational schemes for their classrooms.*

In this study, teachers unanimously reported that Kagan's structures were the most fun and easiest to implement. Overall, these teachers knew the least about the Slavin model, which is not surprising since half of his paradigm is tied to curriculum packages that school systems purchase. Teachers who attended trainings that provided a mix of models found it difficult to identify articulately key elements of any of the three paradigms, as the previous story of the "pickle people" clearly indicates. Rather than follow models didactically, these teachers used their classroom experience, common sense, and basic educational philosophy to do what worked best for them.

The only exception to the pattern of mixing elements of different models for classroom use was found in the fifth interview with the teacher

and trainer for the Slavin model. Although she knew all three paradigms, part of her job responsibility was to provide staff training within her system for the Slavin model of cooperative learning. In that capacity, she stayed true to the Slavin model. The teacher in interview three also works in a system that adopted one of Slavin's curriculum packages, but she admitted that she had tried Kagan's structures to vary classroom activities.

The people interviewed for this study expressed a desire for still more training. They talked about wanting to connect with a larger network of seasoned cooperative learning users to talk about their classroom experiences, share strategies, problem solve, and sustain their enthusiasm. They wanted to reach beyond friendships to teachers in other systems. These teachers sought to look at cooperative learning in the classroom through a wider lens and to observe other classrooms for themselves. Even the teacher and trainer for her system fleetingly referred to the possibility of connecting with others to open a charter school.

### **Starting up.**

Within the study, all but two people began slowly with classroom implementation and built on their experiences. After writing detailed lesson plans, they started with one class, or a segment of the curriculum, until they become comfortable enough to add more pieces. They

recorded successes and failures so as to adapt cooperative activities they use in the years that followed.

In the lower elementary levels, some further deviations surfaced. "I found I can't begin with the whole class in kindergarten and first grade," an elementary teacher shared (Interview 13). She started with students whose readiness and social skills were better developed, and trained them as a feeder group of students she would use as models in the future. Another teacher, who taught the same grade level, reported similar accommodations.

Two teachers deviated from the other sixteen by "jumping in with both feet." (Interviews 5 and 14) Each admitted this had more to do with their own personality than any program rationale. These two not only considered themselves to be cooperative as individuals but expressed a great deal of confidence in their own abilities. They clearly were risk takers who felt they could think and problem solve as they went. They prepared lesson plans well before starting and determined that any revisions necessary would be minimal. Like their peers who proceeded cautiously, this pair documented the advantages and disadvantages of each lesson for future use.

### **Preparing the student for cooperative learning.**

Once these teachers were ready to begin, there were no exceptions to a universal standard of preparing children well for the



introduction of cooperative learning. Start-up mechanisms included a number of these variations:

- Talking about what cooperation means.
- Explaining differences between cooperative groups and other group projects.
- Explaining students' roles in cooperative groups.
- Role playing cooperative groups.
- Teaching the vocabulary of cooperation.
- Developing classroom guidelines for cooperative learning.
- Teaching one cooperative group rule at a time and posting the rules in class.
- Providing written guidelines to be discussed before beginning.
- Engaging in team building activities.
- Teaching social skills appropriate for group functioning.
- Making analogies to family living.
- Participating in pairing up activities.
- Making charts for academic tasks and social skills.
- Practicing listening and responding skills.
- Rearranging classroom seating.
- Rank ordering class lists according to students' past academic performance.
- Showing videos of students in cooperative groups.

Three-quarters of the teachers reported spending two or three days preparing to begin cooperative learning groups. The remaining quarter reported that if students had previously worked in cooperative learning groups, they needed only reminders about the current teacher's academic and social expectations for students in groups. Teachers felt that pupils in the upper grades and in systems which had adopted cooperative models system-wide needed less preparation. *It is important to note here that teachers were specifically referring to students' understanding of vocabulary associated with cooperation, group roles, and social and academic skills necessary for completion of cooperative group tasks, and not the personal developmental levels of the students.*

### **Choosing the size of groups.**

Teachers chose the size of classroom groups. Those using the Slavin model formed groups of four, with groups of five accommodating extra students. The remainder of the teachers heeded the advice of trainers to start small when forming groups; without exception, they began with pairs. As time went on, the size of groups changed as teachers became more comfortable. Group sizes varied from two to seven. The larger group size was used when an expert group formed within a Jigsaw structure. The Johnson's, Kagan, and Slavin all use adaptations of Aronson's Jigsaw structure (Aronson et al, 1978). Sometimes larger groups were convened for particular artistic or dramatic productions when many people were needed to lessen the workload. Groups of two's or four's were the most frequently used group sizes reported in this study.

### **Reluctant students.**

When probed about students who strongly resist group work, teachers reported that they occasionally allowed resistant students to work alone. This occurred only after the student conferenced with the teacher and knew of his/her responsibility for all the work, if choosing to work independently. Universally, these teachers reported that students making such a choice eventually elected to rejoin the group without further incident. *Elements of choice and control appeared to be critical for the students in these situations, rather than aversion to the*

*cooperative group process. These students' reactions appeared to be analogous to the teachers' experiences in cooperative learning training models.*

### **Longevity of groups.**

The length of time students spent in groups varied considerably. Students stayed together for one activity, period, project, unit, or term. Teachers often reported keeping some groups together for longer periods of time to allow bonding to occur. Teachers formed spontaneous groups, they reported, to make the language of learning manageable by "replaying teacher talk" in student groups, to practice skills with peers, to generating ideas, or to encourage risk taking. Generally, the length of time allotted matched the task students needed to accomplish. No teachers from this study reported forming long term base groups, as recommended by the Johnsons. Information, obtained through probing, led me to believe that teachers could not influence the maintenance of base groups once students left their classrooms, and therefore teachers elected not to deal with this issue. *In light of some analogous cooperative strategies being recommended for teachers in school reform movements, such as teacher based support teams and school based management teams, I wondered if long term base groups may be something teachers will consider for their classrooms in the future.*

### **Constructing the groups.**

The teachers interviewed for this study agreed that diversely constructed groups worked best. Students' gender, nationality, personality, social skills, as well as, academic, leadership, and performance abilities were criteria these teachers used in constructing groups. Teachers carefully considered diversity when they placed students in groups. Teachers who used the Slavin model strictly adhered to his prescribed format for constructing groups from a rank ordering of the class according to some measure of current academic performance. Teachers using the Johnsons' or Kagan's model reported that their primary concern was diversity when they selected and placed students in groups. Rarely did these teachers allow students to select their own group members based on friendship. They cautioned that any perceived lack of popularity by children hurts the child's self-esteem. Usually, student formed groups convened only for activities that involved holiday celebrations or school performances. These eighteen educators unanimously agreed that groups homogeneously formed were the least productive. Most often, teachers tried to balance the group according to gender, personality, and academic levels of students. When using Kagan's structures over short periods, teachers sometimes formed random groupings. No teachers reported using random groupings for projects that required longer time frames. Once groups formed, teachers gave students directions and a timetable for the completion of tasks, seldom making any changes in the student groupings. Part of the

purpose of group work, according to these teachers, was to guide and encourage students to solve problems that related to group functioning.

**Demands on teachers' time:**

**Developing classroom materials and teaching social skills.**

For these teachers, the two things that required their attention most urgently were constructing necessary classroom materials and teaching students the appropriate social skills needed for effective cooperative group functioning. The exception was Slavin's curriculum based model where materials were readily available, although both of the teachers using that model did supplement the materials. One of these teacher felt strongly that Slavin's materials were too repetitive to hold the interest of today's children. *I recorded in my notes that this teacher had recently come into a school system using the Slavin model. She was newly trained, and I could not be sure that her perception reflected inadequacies in Slavin's model, or was due to her own inexperience with this cooperative structure and the program elements.*

The rest of the teachers, who implemented Johnson and Johnson or Kagan models, spent much time preparing materials for classroom use. Sometimes they copied ready-made items from cooperative learning books. Other times, they created or customized materials to suit their needs. Among the materials they devised were role cards, buttons, lists of rules, job descriptions, team assignments, activities, lesson plans,

overheads, assessment tools, bonus points criteria charts, and monitoring sheets.

Teachers of kindergarten, first grade, and foreign languages noted that little, if any, materials were available to them. They made or borrowed most of what they needed before forming cooperative groups of children. Participants from these three groups noted that newer textbooks provided more suggestions and guidance for teachers to adapt material for group activities and, in some cases, offered sample lessons or activities specifically designed for cooperative groups.

In interview eight the teacher felt, "having a course that allowed for the construction of materials for classroom use" facilitated her use of the Johnson model. Another teacher reported that materials she had designed were so popular with her students that another teacher asked to use them to teach a similar unit in another classroom.

Two teachers of upper level classes stated that cooperative learning books dedicated to subject areas were beginning to appear on the market. A teacher referred to computers and computer software programs as materials available to groups. Simulation software, especially in social studies and science, permitted students to work in groups to replicate authentic life experiences. Another teacher designed lessons and materials as the final project in her advanced degree program, and stated that she may contact a textbook manufacturer to see if these materials are marketable.

Most of these teachers collaborated with colleagues, at one time or another, to make materials. They agreed that more time was spent making materials initially, and that it became easier as they developed a reservoir of personal classroom materials. All Kagan trained teachers felt that his structures made development of materials an easier task, since many of Kagan's structures support short term projects.

### **Teaching social skills.**

Within all three cooperative learning models being considered in this study, it was necessary to establish a cooperative context prior to teaching academic skills. All teachers interviewed noted that a good part of their own job required them to use appropriate social skills. They interacted with children, peers, parents, administrators, and community representatives on a daily, on-going basis. These interactions occurred and reoccurred spontaneously as part of the interrelationships necessary for the smooth operation of any large community agency. In several instances, teachers remarked that indeed this social interplay was equally as important as the daily teaching of mandated curriculum.

In the classrooms of the teachers interviewed, a transformation from didactic to interactive teaching was occurring. Within the traditional teaching models in which they had been trained, the teacher regulated all social interactions that took place in the classroom. Now, sixteen teachers, using either the Johnson and Johnson or Kagan model, adopted the formal teaching of social skills. "I think it is time for educators

to capitalize on the fact that these kids are social to begin with," related a teacher. (Interview 1) "It's a long process, teaching the students social skills they will need in their group," commented another. (Interview 2)

The teachers in this study taught students the skills they needed to complete particular tasks, or to perform specific roles, by introducing those skills one, or several, at a time. They addressed listening skills first. The methods used initially to teach social skills were modeling, role playing, and developing charts. No matter whether using the Johnsons' or Kagan's model, they reported teaching the concept of "twelve inch voices," which is specifically attributable to the Johnsons' paradigm (Johnson, Johnson, & Holubec, 1991). A range of other behaviors were targeted: interacting without putting people down, recognizing another student's contribution in a positive way, encouraging group members, being responsible for one's task as a member of a group, sharing resources, accepting the strengths and limitations of others in a group, accepting cultural differences, and negotiating perceived disagreements. Teachers were surprised by the lack of social skills students exhibited in cooperative groups. "Teaching students appropriate social skills is the most difficult thing we have to do in cooperative learning," one teacher expressed. (Interview 13)

These teachers reported that it took from one to three days to teach a minimum number of social skills before academics could be addressed. Once a series of guidelines were in place and students had practiced and received feedback on appropriate interaction, students



monitored their own responses and those of group members. Students asked teachers to clarify issues or arbitrate more complicated conflicts, rather than to dictate rules and consequences.

The two Slavin trained teachers in this study did not formally teach social skills, since Slavin professes that his formula for the construction of groups and the prescribed curricula activities are structured so tightly in his model that group process is automatically controlled. Each of these two reported that within this tightly structured paradigm students' ability to function independently and take greater risks increased, both academically and socially. However, one of these two teachers did admit that she had found it necessary to stop and do some informal work on social skills with her class this year, due to the difficult nature of her student population.

The teacher in interview sixteen reported that "formally teaching social skills was the most difficult task" she faced when working with cooperative learning models. Without exception, the teachers in this study believed that students entered their classrooms without adequate tools to interact effectively with others.

"I found I had to step back, start at the beginning, spend a lot of time teaching the kids about working together, about having their roles in groups - how important it was to stick to the task and be able to evaluate themselves. I have spent probably as much time doing that kind of thing as actually having them do academic things." (Interview 9)

Occasionally, in schools adopting cooperative learning system wide, teachers felt children's social skills were at a slightly higher level. This

may have been due to the consistent use of cooperative structures over grade levels and subjects. However, as previously noted, one of these teachers still taught social skills for some part of class time. Once again, this may relate to her own inexperience rather than any deficiency in the model.

*As I reflected on these teachers' comments, I wondered whether, in some part, this difficulty with social interactions had been manufactured by school systems that disempowered students, leading them to believe that educators and authority figures have the answers to problems, whether great or small, in academic and social realms. Initially, when working in groups, students appeared to have a lack of intrinsic motivation that affected their ability to put their best effort into group work and to carry their own weight among their peers. The use of reward systems in cooperative models, either for academic functioning and for maintaining effective group relationships, will be discussed further in this chapter. The debate among researchers in regard to the use of rewards will be discussed as well.*

Commonly reiterated difficulties related to social functioning were that some students drifted to social conversation and to off task behaviors, that some youngsters "hitchhiked" on the achievements of others, and that too many children used put downs when talking to others in groups. Many techniques were used to help students manage social skills in cooperative groups and accommodations were made for the ages of students.

In dealing with social problems, the first caution teachers offered was to be careful about the initial construction of groups. Most difficulties could be averted if the groups were constructed with care. The size of the group and personality mix were given serious consideration. Teachers of younger children most commonly reconfigured a group when social problems occurred, stating that young children don't have long memories following disagreements. Yet, one daring teacher declared that she learned the most when she sat back and told her students that they had to find a way to solve their problems. "I think they are more equitable," she said. (Interview 13)

At times, students constructed their own operating guidelines before beginning group tasks. When difficulties arose, teachers asked students to review their guidelines, to decide if their rules were appropriate, and to resolve conflicts according to their own established criteria. About half of the teachers used group processing sheets to monitor social skills, and these were the teachers who had used cooperative learning for a longer period of time. Teachers just beginning with groups could not envision the use of a formalized group processing sheet, until they became more comfortable with the entire cooperative concept.

None of the teachers in this study used student monitors for groups. These teachers reported that they were solely responsible for observing groups as they functioned and for offering students options whenever groups appeared to be stalemated or bogged down on an

issue. They readily admitted that they jumped in too quickly to solve problems the group could solve itself. For them, it would take time to break the old mold wherein the teacher made all the classroom decisions. Each respondent reported making progress in this area, yet some more than others. *Reflecting back, I thought that true empowerment for students may come when these teachers not only allow students to function in cooperative groups, but have students regulate the functioning of the groups as well.*

Students received feedback on the group process in a number of ways. Teachers used combinations of self reflection, peer feedback, and teacher reporting. The simplest self monitoring tool required students to reflect on their part in the group and identify one thing they did well and one thing they needed to improve next time. Also, student groups assessed their own group's performance and helped identify strategies used by other effective student groups. Teachers reported back to groups in a number of ways. Sometimes they conferenced with each group, acting as facilitator. When reporting back to the whole class, these teachers did not identify which group exhibited specific positive or negative behaviors. Rather they allowed students to reflect on their own group behaviors and assess whether the teacher's comments applied to their group. The only exception was when teachers gave public recognition to groups for excelling in some way. Sometimes teachers used response journals to write back and forth to student in private. For

the most part, these teachers felt as responsible for documenting students' social functioning in groups as they did for their academic assessment.

The teachers surveyed clearly articulated that teaching social skills was an ongoing process, not an introductory lesson. All used various types of charts to post reminders of acceptable classroom parameters for group work. Within cooperative groups, boundaries governing students' social interactions related more to the subject matter and the students' tasks in the group than to the classroom teachers' management styles.

Major differences among the responses of primary, middle school, and high school teachers emerged when they talked about formally teaching social skills. Since young children are more invested in pleasing adults, teachers at the primary level exerted a good deal of control over students within whole class models. Primary school teachers were surprised at the lack of social constraints students exhibited at an independent level. Kindergarten and first grade teachers worked with small groups to teach appropriate interaction and to set some operational limits. Students' immaturity limited the extent to which students could make independent decisions. Teachers' concerns were tied to physical and emotional safety issues applicable to young children. "I still may have to put a child in time out for a few minutes," reported a teacher. (Interview 14) Children's' reading levels and expressive language were limited, so most classroom charts contained "smiley" or

sad faced icons, or other appropriate visual cues. Sometimes children working in groups had their own index cards with happy and sad faces to signal responses within their groups. Other times, children had sticks to put in the center when it was their time to talk, thereby ensuring that all equally participated.

By third grade level children began to become more self-empowered and to be able to use written charts. They could develop a list of socially acceptable behaviors. No fourth grade teachers participated in this study. *However, my own three years of experience within inclusion classes that use cooperative learning at the fourth grade level confirm the experiences of primary school teachers that the students at the higher primary levels are more able to learn negotiating skills and to make social judgments.*

By the time students reached middle school, teachers empowered students by allowing them to share decisions regarding acceptable behaviors in cooperative learning groups. Often, students developed charts that detailed actions and consequences resulting from those actions. After classroom discussions of behaviors and consequences, students decided on the limits that should be placed on groups. As at the primary level, visual reminders were posted to facilitate students' self-monitoring. Role-playing frequently followed the development of lists, so that all students had a clear image of what was expected of them. At this level, teachers cautioned that students must be guided not to formulate extremely rigid rules of behavior or expectations. Teachers indicated

that, left to their own devices, middle school students could be very hard on their peer group and inflexible in rules that govern social behavior. Some teachers reported that videotaping group activities was extremely effective in the middle school. After watching themselves interact, students went back and adapted their operating rules. All of the middle school teachers in this study emphatically reported that it was necessary for them to set clear limits initially to ensure that no student was left out and that all students were awarded equal status in their groups.

The two high school teachers interviewed in this study were in different settings. One was a special education teacher in an inclusion classroom, while the other was a regular education teacher. Both teachers reported that by the time students reach this level they have been exposed to at least one teacher who used cooperative groups, and they have clear ideas about what is acceptable group behavior in classrooms. The teacher in interview fifteen began the year by saying,

"I am just reminding you of these things. You are football and basketball players, as well as chorus and band members. You know about working together and encouraging your teammates."

So for these teachers the issue was not whether students know and understand, but whether or not they will comply with agreed upon rules. High school students do not respond well, according to these two teachers, if they perceive that teachers are underestimating their capabilities. However, at upper levels the students' images of themselves and the mix of the group become important factors influencing whether or not groups work effectively. Students are often

more invested in upholding their image than cooperating, according to these teachers. For them, teaching social skills takes on a different meaning. As with any concept that students have previously been "taught", the question becomes whether or not students have internalized the process. Both teachers felt that high school students still have much to learn about effective cooperative practices. In a single voice, these teachers expressed that the structure of schools, and of American society, overwhelmingly foster competition. The delicate balance for them as teachers was to influence cooperative skills without stifling the newly emerging, independent spirit of the young adult. These teachers believed it was essential for high school teachers to inform students about the importance of cooperative skills in the workplace and to teach negotiating skills when differences arose.

The teachers in this study committed themselves to implementing cooperative models, and in doing so committed themselves to influencing the social skills students bring to group work. No matter which model they used or which grade level they taught, these teachers spent time teaching social skills, reinforcing previously taught social skills, influencing changes in social behavior, and/or structuring academics in ways that controlled social functioning within groups. Unanimously, these teachers reported that when students developed more appropriate social skills in their groups self-esteem was positively influenced. In spite of the time needed to develop appropriate social skills within groups, these teachers felt it was time well spent. Many of



them made up for the slow start later in the year. Only two foreign language teachers in this study said that they did not cover as much curriculum as their grade level peers, but they attributed this to factors relating to the teaching of languages in cooperative groups rather than to the teaching of social skills. Both of these teachers believed that the use of cooperative learning in language classes led to greater language fluency for students in classes that had previously emphasized the reading, translating, and writing of a second language. For these teachers, cooperative learning activities provided them with what they considered a more balanced approach to the teaching of a foreign language, an approach they had previously sought but had not found.

*For teachers in this study, development of classroom materials and teaching of social skills demanded more of their time than any other factors. Materials that dealt with social processes, as well as with academics, were used in these classrooms. The textbook ceased to be the prime source of information in cooperative groups. Primary sources, computers, and research texts were used with increased frequency. Teacher developed research problems, or questions developed by the student groups, took the place of end of chapter reviews. Learning in these classrooms became more subjective in nature than the previously used objective text based questions. In these cooperative classrooms, learning was being defined differently than it had been previously.*

*The management of social skills within classrooms clearly was an element that differentiated these cooperative learning classrooms from*

*competitive and individualistic ones. In this study all eighteen teachers expressed surprise at the number of assumptions they held regarding students' abilities to work cooperatively. It was not until they began to allow students some decision making power that they discovered most of their students did not have the skills to negotiate with their peer group. Teaching even the minimum skills necessary for independent functioning of student groups took far longer than any of these teachers anticipated. Once these teachers undertook the teaching of social skills they became committed to the idea that schools are the appropriate locus for teaching students skills they need to function in groups within society. There was a realization on the part of the teachers that, as with any other skill taught in schools, modeling of the appropriate behaviors by the teacher was not enough to guarantee learning. Students needed practice for social functioning just as they did for academics.*

*I saw that these teachers who had embarked upon journeys to investigate cooperative learning paradigms had been transformed in the process. They had made changes in what they taught and how they taught. They talked in new ways about why they teach. After interviewing the teachers in this study, they often commented, "off the record" so to speak, that they had come a long way. For me, this was a real metaphor for their endeavors and an indication that significant paradigm shifts were taking place.*

**Assessing and documenting changes teachers attribute to the use of cooperative learning paradigms:**

**Assessment - group versus individual assessment in cooperative groups.**

A commonly held concern for these educators when initiating classroom changes was their professional responsibility to assess rigorously and to document accurately students' academic performance and progress. Unanimously, these eighteen teachers indicated that their students were individually accountable for their own work. None used academic group grades for tests, quizzes, or projects. Although there were group projects required of students, each youngster was individually responsible and accountable for a common core of knowledge from the project. Materials on which students would be assessed were made available to each student. It was on these materials, and the student's independent portion of a project, that each student received a grade.

Teachers reported back to students on the group process, but did not consider this part of classroom assessment. Rather, teachers considered this data useful to document students' daily classroom performance, in much the same way that teachers previously documented students' class participation. Records of teachers' observations provided information helpful to teachers when adding narrative comments to report cards regarding students' classroom participation.

Teachers' records from previous years compared the achievement of student in competition, individualistic, and cooperative settings. Student portfolios documented individual progress. For older students self assessment occurred in the form of journal writing. Video tapes documented progress for performance pieces. Parents' comments regarding group work were documented and maintained in teachers' records. When reporting academic grades, these teachers relied on teacher prepared tests, student portfolios, and curriculum based publisher prepared assessment tools, as they had in the past.

Teachers' documentation of students' functioning in groups provided them with richer descriptions of the strengths and weaknesses of students as individuals. A common response from these teachers was that the focus on groups, in contrast to whole class, permitted them to "get a better handle on each child's skills" and "know them better." These teachers felt the use of cooperative learning groups was in keeping with a movement in education toward authentic assessment, such as the use of portfolios, as a more accurate record of students' academic functioning.

*In terms of assessment, these teachers appeared to be torn between accountability that was tied to traditional classroom models and an upcoming reformation through the use of portfolios. All the school systems involved still reported students' growth in the form of grades rather than narrative. Therefore, these teachers utilized the rich*

*information they had accumulated about students' learning, and styles of learning, as additional information rather than formal assessment.*

**Bonus points and rewards as used in cooperative learning groups.**

All teachers in this study used bonus points and/or rewards for students working in cooperative groups; some used both. The two teachers implementing Slavin's model used bonus points from tournaments only to award certificates to successful teams, as prescribed by the Slavin model. Within this paradigm, teams of students review teacher presented material within their group, study in their group and independently, and then compete in intergroup competitions. Teams achieve success as each member of the team earns bonus points based on his/her own individual success as measured against preset criteria.

Slavin's cooperative format prescribes study in heterogeneous groups and competition in homogeneous tournaments to ensure what he terms "equal status" and opportunity for "success for all" (Slavin, 1990). He states that the use of intergroup competition is appropriate after intragroup cooperation, since peer recognition of successful cooperative teams was responsible, in part, for the increased student achievement documented in quantitative studies of his model (Slavin, 1991b). Members of effective teams receive certificates based on the independent successes of individuals within their cooperative team. According to Slavin, this procedure ensures positive interdependence,

individual accountability, and success for all, since both motivational and cognitive theory support practices within his model (Slavin, 1990).

Having adopted Slavin's model, these two teachers followed the reward system built into this structure and used no other reward system. Bonus points were not linked to assessment of academic functioning but to tournaments which prepared students for individual tests given at a later time.

*The public debate concerning the extrinsic value of rewards still rages between Robert Slavin, who believes in the use of award certificates as rewards, and Alfie Kohn, who believes that tangible rewards may inhibit the development of intrinsic motivation (Kohn, 1991a, 1991b; Slavin, 1991a). The highest academic gains for students have been attributed to Slavin's models, which all involve intragroup cooperation, intergroup competition, and award certificates for members of successful groups (Slavin, 1983). Slavin's formula for success relies heavily on peer recognition in the form of certificates publicly awarded in classrooms. Kohn argues that any tangible reward inhibits intrinsic motivation. Slavin counters that it is not the certificates, with literally no street value, but the attention of peers that is important. Since leading researchers are still disputing this matter, the nature of what constitutes competitive practices and when and how these practices are appropriate within cooperative structures indicate an area that requires further research.*

Seven teachers, implementing the Johnsons' and/or the Kagan model, used bonus points based on their own preset criteria. Students earned bonus points for academic achievement or for their social functioning within the cooperative group. These teachers awarded bonus points for a variety of accomplishments: completing homework, matching a criterion score on an individual exam or quiz, attaining a cumulative criterion score within the group, equaling or surpassing one's own previous high score on an assessment, successfully completing an individual task within the group, performing an assigned role in the group effectively, or contributing to the group or class in an outstanding way. Within the Johnsons' and Kagan's model, teachers decided the number of bonus points, depending on the complexity or difficulty of the task. The teachers interviewed in this study used a range of from one to ten points.

Rewards associated with these bonus points took many forms: certificates of recognition; passes for free time, homework, or computer use; tangible rewards, such as food or school supplies; extra credit points added to cumulative grades; checks on classroom charts; privileges outside the classroom, such as extended recess; recognition in school-wide newspapers; stickers; extra gym, art, or music privileges; and small group or whole class celebrations. Bonus points were occasionally incorporated into cumulative grades in much the same way that extra credit point had previously been included.

The remaining eleven teachers, who did not award bonus points, recognized effective groups with rewards similar to those previously

mentioned, except that students' rewards were not linked to grades. Teachers set short term academic and/or social goals for cooperative learning groups. Personal improvement, effective performance of individual roles within a group, and superior functioning by all members of any group were some of the criterion set by these teachers.

Whether using bonus points or rewards, the teachers within this study reported they sometimes selected the type of reward themselves and other times allowed students to select rewards meaningful to them. The only exceptions were the two teachers using Slavin's model wherein certificates were the mandated rewards.

**Documenting and evaluating perceived changes teachers attribute to cooperative learning paradigms.**

*Evaluating academic and social gains connected to a shift from individualistic and competitive paradigms requires broadening the ways assessment is viewed. Since cooperative learning is learning imbedded within a context, it does not fit neatly the test-teach-test-reteach-test pattern linked to traditions designed to evaluate mastery of the scope and sequence of each school's curriculum. Although teachers adopting cooperative models believe in a variety of authentic assessments that provide nonjudgmental feedback, they are professionals within systems requiring them to test and grade students in ways linked to individualistic and competitive paradigms. These teachers, caught in this predicament, creatively attempted to assess and document students' growth.*



Documentation involved keeping records of meaningful changes obtained in a variety of ways: observations of student-student interactions, student-teacher discussions, students' self-evaluations, group processing records, student journals, parents' comments, student interviews, group presentations, testimonials from other teachers, and/or video taping of cooperative groups. Traditional assessments took the same form as those previously required of teachers: chapter tests, teacher designed tests; essays, criterion-based tests, individual presentations, and standardized tests.

Teachers in this study sought to make changes in cognitive and affective realms. Though all of them reported cognitive gains, improvement in grades and test scores ranged from slight to major. Teachers with little experience using cooperative models announced that minimal cognitive gains were attributable to their unfamiliarity with this type of instruction. "I think cooperative learning is useful and I am comfortable with what I do, but I still have some questions about what I am doing," confessed a seventh grade teacher. (Interview 11)

Apologetically, teachers vowed to maximize the power of cooperative learning groups as they became more proficient enablers. Not one of these eighteen teachers doubted that academic gains could be achieved by involving students in cooperative paradigms for longer periods of time. Teachers who had three or more years experience with cooperative learning models reported academic gains that ranged from significant to high. "I saw the students learning so much more, not just academically,

but socially too. I've noticed more creativity in their work," explained a second grade teacher. (Interview 8)

As if to quell the disbelief of the listener, during their interviews teachers offered to produce rank books that documented students' grades on similar units over up to a decade or more of teaching. However, these teachers spoke more persuasively about the ways in which the students learned and used knowledge. "A difficulty at sixth grade is getting boys and girls to work together. In cooperative learning they learn how to work together in groups," explained a teacher.

(Interview 17) Teachers spoke about classrooms where students made connections to previously taught material or to interdisciplinary units. A seventh grade teacher described a cooperative project with a fourth grade class, "We were doing a multicultural unit. I divided the class up for the play, music, sets, food, teaching the children we teamed with, whatever. I just stepped back and they took over. They really enriched their lives through this project." (Interview 10) This teacher reported that groups of students learning together needed less reteaching of previously presented material. An eighth grade teacher related, "I don't think they are as intimidated when asking questions in a small group. They talk about academics. Test grades are higher, but mainly they do better because they don't feel stupid and really understand things."

(Interview 1) Teachers related that students not only understood concepts but committed them to long term memory, as evidenced in classroom discussions that took place months later.

In terms of affective changes, there was little difference between short term and long term users of cooperative learning paradigms. It was as if they were saying in one voice, "Seeing is believing." No matter how much teachers had read or believed possible, they were impressed by their students at all levels. Primary teachers talked about underestimating the fairness and capabilities of young children faced with making decisions affecting their peers. "Usually they get right down to solving the problem. Sometimes they decide to be friends. Sometimes, they say, 'I'm sorry,'" related a first grade teacher. (Interview 13) Middle school teachers acknowledged that their students openly enjoyed working more closely with their classmates and were willing to do so within the structure of academic tasks, if that was the only option available to them. "You know what works in a group and what doesn't. You can talk to them. They'll tell you what they like. You know when to push an issue and when not to," commented an eighth grade teacher. (Interview 5) High school teachers reported that focused interest groups brought diverse students together, often enabling them to follow their own learning styles or personal objectives and resulting in surprisingly creative products that indicated in-depth learning. "You do a little bit on critical thinking. Then you put ideas on the board and let four students sign up for their choice. You remind them the solutions must be valid and logical," described a high school teacher. (Interview 15)

This group of educators strongly insisted that by the end of the year: classes became like families reluctant to part, unlikely friendships

developed, students' behaviors changed so much for the better as to merit comment from other educators, and students' self-esteem rose. Teachers at high school levels vowed that they could tell which student had previously been involved in cooperative learning groups. "I would be supervising study hall, and a student would have something I didn't know. I would say 'Who can help us with this?' It worked every time," this teacher delightedly explained. (Interview 15) Similarly, teachers at middle school level made the same claim for students transitioning into their classes from elementary levels. "I passed something out early in the year. I said students were to work on it independently. There were groans of 'Do we have to? Can't we do it in groups?' " recalled an eighth grade teacher. (Interview 2) These testimonies provided a unique form of documentation or informal assessment of students' increased interpersonal skills. However, within these traditionally organized school systems there were no ways to document formally nor to inform teachers of upper level students of affective gains made by some students. Word of mouth was the only vehicle available, but no significant conference time is provided for collaborating or reflecting on teaching practices.

The teachers in this study indicated that they were uncovering learning rather than covering curriculum. This was particularly evident when I listened to the two teachers of foreign language, one at middle school level and the other at high school level. They were from different systems and had never met. Yet they spoke with one voice. Neither covered as many units in texts as did their peers in the foreign language

departments. "I didn't cover as much as the other teacher, but I'm getting more comfortable focusing on proficiency. It takes a risk taker to become proficient," said one of these teachers. (Interview 10) For these teachers language proficiency signified a balance of skills that included speaking a foreign language, in contrast to language programs with a strong emphasis on reading and writing the foreign language. These teachers explained that their conversion to cooperative learning forced them to rethink how foreign languages were taught. They were not teaching in the way they had been taught nor in the way they were taught to teach others. Previous groups of students learned to read, write, translate, and speak a second language over the years, but few students became fluent in the language. Today, in their classes, students in pairs conversed right from the beginning. Like exchange students living in a foreign land, they became immersed in the language. Although grammar, reading, writing, and translating were still taught, the biggest changes occurred in the way students manipulated a foreign language and made it usable. Again assessment was an issue.

Empirically, without any formal tool to assess and document the gains, these teachers reported that the breadth of learning increased for students. They knew from colleagues at upper grade levels that their students were more able than others to assimilate new concepts and make learning connections. A middle school teacher reported of a high school teacher, "She could tell right away who had been worked with and who hadn't. Because of their exposure, things fell right into place for

them." (Interview 10) Within themselves, these two foreign language teachers perceived that there were connections between their students' capacity to acquire new knowledge and the empowerment aspect of cooperative learning models.

*For all the teachers in this study, documentation and assessment were complex issues. As I listened, I formed a mental image of students climbing a staircase. The step provides depth and the riser height. Teachers in this study seemed to be telling me that prior to their implementation of cooperative learning they encouraged students to climb staircases with steep risers and narrow horizontal steps. Since their implementation of cooperative learning, they encourage students to climb staircases with average risers and wide steps with a solid footing. Simply put, I heard these teachers say that the heights to which students rise are measurable, but the depths of students' understanding are not easily captured.*

*The teachers in this study are analogous to people stuck between two floors of an elevator. Although these educators reported students' progress on set curricula through report cards and were judged, in part, by how well their classes performed on standardized tests, they reported some form of double bookkeeping. They assessed students as expected within their systems, but also documented the richness of each child's experience through authentic, albeit nontraditional, vehicles.*

## **Interaction within the school community.**

### **Informing parents about cooperative learning.**

Before beginning cooperative groups, only half of the teachers in this study informed parents. For the two teachers in the school system who adopted Slavin's curriculum model, information sessions were conducted by central administration staff. These teachers reported that no parents expressed concerns to them directly. Teachers of young children felt that parents expected classrooms at this level to be run cooperatively. "Parents just assume that the children are working together because of the grade level," said one teacher (Interview 9). Here it can be speculated that parents were referring more to the social context of group work than the academic, though clearly the teachers' purposes included an academic focus. Additionally, for these parents, working together does not necessarily signify cooperative groups nor reveal whether or not they had knowledge of how formal cooperative groups work for children. These teachers believed that, at this level, working in cooperative groups was not a problem, because classes were self-contained, parents' issues were minimal, and grading was not an issue.

The nine teachers in this study who notified parents of their intention to use cooperative groups provided them with details about formal cooperative learning. Two teachers joined with colleagues to conduct informational sessions for parents. They felt that by providing an outlet for parents to learn about cooperative learning and to ask

questions, parental concerns were alleviated. One of these teachers continued to be questioned about the use of cooperative groups by a parent who was constantly at the school with other issues as well. The second teacher reported having experienced no difficulties.

The seven remaining teachers informed parents in a number of ways. These teachers used a combination of letters to parents, informational packets, informal presentations at parents' nights or open houses, and communication whereby children explained the groups to their parents. These teachers felt they needed to provide information about cooperative learning in small doses and through many vehicles to satisfy diverse parent groups.

### **Parents' reactions and teachers' responses.**

The most negative and vocal parents were those who believed their children were gifted. These parents expressed concerns about mixing their children with children of lesser abilities. The teachers viewed the stance of these parents as elitist, while the parents saw themselves as advocates for their children. This teacher's comments reflected the views of teachers in this study:

"The parents who verbalize the most are the ones who think their kids are the gifted kids, who think their kids aren't getting what they really need in the school system. They think their kids are teaching and are being used in these cooperative groups to help lower level kids. They don't want their kids working with lower level kids. They want their kids to work in elite groups."  
(Interview 12)



Teachers handled the reactions of negative parents in different ways. Teachers who were in the first three years of implementation tended to be less informed and therefore less able to respond to parents' negative comments. "I wasn't sure of myself," shared a teacher. (Interview 3) Those who were more experienced or knowledgeable reacted in other ways. "If parents are concerned about children teaching other children, I see there has been a failure in communication," one person stated. (Interview 14) Many teachers confidently informed parents that the teacher still teaches when using cooperative learning groups. They made it clear that cooperative practice simply replaced the independent practice for children after direct instruction occurred.

Teachers saw that some parents had other issues. "You still have those people who are themselves competitive people, and they don't want cooperation. They want their child to be better than others," a teacher related. (Interview 14) The teachers who fared best with parents were those who specifically informed them that cooperative learning was only one of a number of strategies used within any classroom. They described numerous activities involving competition and individualization within the classroom. These teachers explained that cooperative groups were a way for children to learn the socialization skills needed as members of society while learning academics, but that these groups were only appropriate for part of the school day. They clarified that teachers utilized a mix of strategies and activities to address the diverse learning and personality styles of all the children represented in

classrooms. "I try to access students' individual talents and tap into their strengths," explained a teacher. (Interview 16)

There were teachers who reported successful experiences with parents. "There were no negatives from parents, none at all. They said the children found this year very interesting." (Interview 16) Another teacher revealed her philosophy regarding effective parent-teacher relationships,

"The ultimate thing I find with parents is that if the child is happy and successful, you have their support. Since I've been using cooperative learning activities, I have received a lot of calls saying, 'He's so happy this year. She's so happy this year.' They said that the children found this year very interesting." (Interview 17)

Another teacher reflected on her concern and ultimate resolution of one dilemma,

"I had a little girl I really worried about. She was a smart, smart girl. I was very worried about how I would challenge her. Then, she added so much to the projects. Her mother was enthusiastic. She was thrilled with the differences in the class, because her child was so excited." (Interview 18)

These perspectives point out that not all parents have a depth of understanding about formal cooperative groups and may not be interested in developing any knowledge of them. Their primary concern is their children's well being, as reflected by that child's personal adjustment to his/her school and classroom specifically.

In the seventh interview, I heard an unusual story in which parents were critical forces in the acceptance of the cooperative learning approach. This teacher returned from a year's leave of absence only to

be transferred to a school very traditional in its structure. She originally felt that the staff, administration, and parents saw what she did as chaos. But she was truly committed to teaching cooperatively for about half of her teaching day and forged on in what she perceived as a hostile environment. "We are going to be like a family for the year. We have to learn to get along," this teacher told students and parents. (Interview 7)

She kept portfolios of students' work which parents reviewed periodically. She insisted that students stay in her class and not be pulled out for support services. She willing did anything necessary to draw specialists into her classroom to work with her. This teacher was so busy establishing her program that she forgot to worry about its lack of acceptance. Her colleagues remained distant. Soon parents began to tell her she ran a very different program. Her principal and superintendent dropped into her classes. She began to think she may have to start looking for another teaching position. "I could not change, because I did not believe in their militaristic ways," she confessed. Then June was upon them, and to her surprised, the parents of her children planned a special day to honor her, with full approval of her principal and superintendent. She received wide coverage in the local press and accolades from all the parents. The celebration lasted an entire day. This teacher confided that she still did not think her colleagues believed in nor approved of what she did, but she had achieved a lasting truce and was now in her second year in the same school.

*One thing that surfaced in this study was that, in parent-teacher discussions of cooperative learning, more of the interaction had to do with the interpersonal skills of the teachers and their own confidence levels than with the use of any particular model. Confident teachers who could articulate themselves well in confrontational situations expressed little concern over talking about cooperative learning with parents. Teachers who appeared more reticent expressed the same insecurities about their own skills and expertise in using cooperative models as they did about their contacts with parents.*

*Several implications can be drawn from these findings. Teachers who use formalized cooperative structures in classrooms need to receive enough training in communication skills to be comfortable conversing with both children and adults about their goals and expectations for cooperative learning. They need to be well informed, so that they can advocate for children, based on empirical evidence and research that supports the use of effective paradigms in schools. Classroom teachers must be able to explain the variety of strategies they use to target the full spectrum of student needs. Finally, teachers who use cooperative strategies need the support of peer groups to sustain their own confidence and enthusiasm.*

### **Interactions with colleagues.**

The third teacher I interviewed came into a school system with the Slavin model in place. "Some people have had a lot of training. There's

a lot of experience with many of the techniques that are out there," she expressed. This teacher felt somewhat at a lack, since all of the teachers in her building had received the initial training from the staff at Johns Hopkins and had experience using the Slavin model. On the other hand, the teacher in interview five was the single most experienced person in the system with the Slavin model, having not only used it for the longest period of time but having been taught to train the teachers in her school system. "I have maybe two other teachers who use it the way it should be used for cognitive elaboration. The teachers think they're doing it. I know they're not." This teacher sought support from friends who were teachers in other systems. "We love to reflect on the teaching practice, on what we are doing, and how we can do it better," she stated.

Seven of the teachers trained in the Johnson and Johnson model by an administrator in their system reported a great deal of support from their colleagues. Not only did the school system grant credit toward step raises for those who participated in training, but it provided them with some access to peer support and reinforcement. Peer observation and consultation was encouraged. Informal discussion groups were available through lists of trainees within the town's various schools. Materials were shared within buildings and with other schools in the system. Even though this was a large suburban school district, the interactions among cooperative learning trainees resembled the friendships commonly formed among employees in small towns.

Teachers who sought out their own training without any central office encouragement, often did so in pairs. The teachers in the first two interviews trained with another teacher from their school. Even though they taught at different levels, occasionally they were able to meet informally to discuss their successes and failures. These teachers shared materials for evaluating group functioning, teaching social skills, and performing roles within groups. They teamed to provide an in-service presentation to teachers in their building to highlight what they had been doing with cooperative groups. Both teachers reported they felt influential in getting other teachers at their grade levels to try some basic cooperative strategies. Now each of these educators was anxious to interact with people from other systems to get some sense of what was happening outside their town. "It's time we start working together at this, share our ideas, be willing to have teachers come into our classrooms, and then sit down afterwards to look at things. We're all there with a common goal, to provide the best education possible for our students," I heard in the first interview.

Another pair of teachers worked together in a mentor/trainee relationship. The tenth teacher I interviewed had a good deal of experience with classroom use of cooperative learning and continued to train in a variety of models. She developed a friendship with a colleague who wanted to learn about cooperative learning after her training. The more experienced teacher took the novice under her wing and guided her every move. Since both teachers taught at the same grade level in

the same building, the experienced teacher shared all her materials. The neophyte shared any materials she made as well. They talked about cooperative learning at every opportunity - planning periods, recess duty, lunch, and after school. What might have been an inequitable relationship turned out not to be, since the more experienced teacher reported that she felt energized, recalled strategies she had forgotten, and reinforced her own belief system in the exchange. This story itself represents an example of a cooperative model in action.

Three teachers typified the type of teacher who sought out cooperative learning on their own, without the support of colleagues and sometimes in the face of collegial disapproval. These teachers were effective teachers with a great deal of self-confidence. They were dedicated to continuing improvement for themselves, their students, and their systems. As educators, they saw education as a larger picture than the four walls of their own schools. These teachers were risk-takers, educational leaders, and visionaries. Their interviews revealed that they were well versed about cooperative learning, as well as a widely diverse set of paradigms that also adhered to the constructivist philosophy of interactive teaching. These teachers had strong interpersonal skills and easily conversed with other educators on various issues pertinent to school reform and improvement. Any isolation they felt within their systems, they attributed to their ability to accept and embrace change, a quality they perceived many teachers lacked.

*As teachers in this study interacted with colleagues, there appeared to be distinct differences of opinion regarding change itself. Cooperative learning fell into a category of shifting paradigms characterized by flexibility. Teacher either rallied around modification of existing school practices or dug in to support entrenched, established patterns of educating children. All of the teachers in this study were committed to progressive change, some because it suited their personal styles and others because they saw the handwriting on the wall, that change was encouraged in their systems or was part of a national trend. Whether these teachers came to cooperative learning voluntarily, out of curiosity, or under duress, all eighteen could not turn back even in the face of some hostile colleagues. What they sought instead was to branch out to make connections with educators who were committed to the same path. Once having cast their die for change, these educators saw themselves as more likely to accept future change than their reluctant peers.*

#### **Interactions with administrators.**

The first two teachers interviewed had a new principal at their school and were unsure where he stood on the use of cooperative learning models. Both reported that he had visited their classrooms during cooperative activities, but that when asked about his thoughts on cooperative groups he answered that he had come from a system "entrenched in the old standard type of schooling" and that he did not know that much about cooperative learning. Two teachers came from



different systems committed to Slavin models town-wide. Although the central administrations in these towns adopted the same cooperative paradigms, one teacher believed that, although the superintendent was knowledgeable, her own building principal did not really know much about cooperative learning. She reported that she met regularly with the principal as liaison to the teams she was training in the Slavin model. He would ask how it was going. When she would respond that there was still a way to go and there was still something missing in classroom practice, the principal would respond, "Whoa! I've been in those rooms and they're not in rows. The kids are in groups doing things." This teacher remarked with hesitation, "I think more training for administrators would help." (Interview 5)

Seven teachers trained in the Johnson and Johnson model by their system reported a great deal of knowledge and support on the part of administration. First, one of the principals was the person doing the training for the system. Then, administrators from the town took turns participating in training along with the teachers. A school committee member participated. The town was in its second year of commitment to voluntary training within the system, and plans were to continue as long as additional teachers sought training. Teachers were encouraged to use avenues of peer support in their schools and town-wide. Finally, the administrator who trained the teachers was available to the staff for follow-up and for access to materials teachers may need. *Even though I knew that the teachers in this town were working without a contract and*

*were in the midst of union negotiations with their central administration, there was no antagonism expressed toward the administrators. The consensus of these teachers seemed to be that there are always problems of one sort or another, but that these would eventually be resolved to most people's satisfaction.*

Some teachers in this study were looking forward to the time when their principals would learn more about cooperative learning. Then there would be a common language with which to communicate with principals as evaluations came due. They looked upon any principal's ignorance of the cooperative process as a temporary condition. Some school systems encouraged teachers to try new things without the building principals really knowing much about specific models like cooperative learning. In one system there was "an organized long-term commitment to changing educational practice." (Interview 12) Often the impetus for change came from the superintendent's office and caught principals and teachers in a search for the "buzz words" of educational reform that were being talked about in professional conferences. According to a teacher, administrators are "skirting the issues" and "failing to be forceful enough to take a clear position." (Interview 14) At times, department heads or curriculum supervisors were put in the position of overseeing change, and they too remained passive in their roles. Administrators appeared to be uncomfortable with the noise levels in cooperative classrooms, two of the teachers reported. Some teachers could only guess as to whether their administrators truly supported cooperative models.

Three distinct patterns relating to administration surfaced in these interviews. Many teachers sought out training on their own, with or without administrative support. Some school based initiatives, that involved teachers and administrators working together, were formed. Mandates for change and specific models for change were sometimes dictated by the central office administration. Since all of the teachers in this study indicated that they were permanently committed to continue their use of cooperative learning models, success was possible within each of these patterns. How could successful experiences result from such diverse circumstances? The personal characteristics of effective teachers, the influence of skillful training models, the elements that best link theory to practice, and the dynamics of what sustains successful practices are areas that would benefit from long term longitudinal studies of cooperative learning models.

*Real differences in administrative support for cooperative learning surfaced in this study. These results bring into question what educational leadership really means for teachers and school systems. At some level of administration, in each of the towns in this study, a push was being made for changes within schools and teachers' classrooms. Only one system appeared to try to unify their school committee, central office administration, building principals, teachers, and parents to move them toward a positive direction that included cooperative learning as one aspect of the transition. Because of a solidarity of purpose within that system and positive incentives offered to teachers, there was a patient*

*dedication to change at the individual's own pace. That patience extended in opposite directions with teachers willing to wait for administrators to be won over, and principals giving teachers time to adjust and absorb new learning.*

*For teachers in the other towns represented, I was left wondering how change was possible when leadership roles and support were uncertainly defined. Many of the teachers in these town surely were leaders, yet they walked on shaky ground. Sometimes they spoke about leaving their workplaces in search of a more favorable site for their beliefs. Other times, they told of their impatience with administrators and their fellow teachers. Often teachers expressed a longing for someone in a position of leadership to guide and communicate with them about their cooperative ventures. Certainly, these teachers resented having to defend their positions to disgruntled parents when administrations had encouraged them to embrace change.*

*Universally, teachers in this study thought that teachers needed to have more time and freedom to do the work of teaching rather than what they saw as public relations within the school community. With roles shifting for all members of the school communities, these teachers felt a heavy burden placed on them to learn, teach, and lead without having been given any additional time or compensation for their new responsibilities. One community made a good start in the right direction, although teachers expressed concerns that their system may drop the ball in terms of follow-up. These educators understood that schools will*

*forever be dynamic places in constant transition. All of the teachers in this study want more safety nets in place for educators in the future. Decisions that determine what the templates for changes will look like should belong to all those involved in school communities. The implication this issue has for schools is that we, as a nation, must design cooperative models of leadership if children are to learn about cooperation. I was struck in this study by the marked lack of cooperative cultures in schools where teachers were attempting to teach cooperation to children. Cooperative paradigms will ultimately be doomed to failure if they are imbedded in individualistic or competitive settings or if they fail to influence the institutions in which they are being used successfully in classrooms.*

**Changes within themselves teachers perceive are linked to their cooperative learning use.**

Without exception, the teachers in this study talked about changes they experienced within themselves as they shifted the focus of their classrooms from individualistic and competitive to cooperative. They explained any transformations within themselves as analogous to a long journey on which they had embarked. Changes took the form of subtle awarenesses and differences in outlook that were best recognized when these teachers reflected back to times when they first considered altering their classroom practices.

### **The first few years.**

Akin to the experience of uncertainty in their first years of teaching, these teachers experienced some doubts and insecurities as they began to implement formal cooperative learning activities. These stages parallel the personal stages of development adults pass through as they develop professionally, as described by researchers of adult development. Adams and Martray (1981) labeled the first three years of teaching as the years of self concerns. In 1984 Burke, Fessler, and Christensen described dynamic and flexible movement of teachers backward and forward in their development as they experience personal, environmental, or organizational shifts. In Teachers at Work, Johnson remarked that adjustment for teachers is still considered their problem, with no organizational supports present to assist developmental changes (Johnson, 1990).

Many factors caused teachers initial insecurities. Noise levels within the classroom, the unfamiliarity of teaching social skills, a lack of classroom materials, and management issues made them feel uncomfortable. Confidence waned when a lesson went poorly and increased when it went well. Normally self-assured teachers endured much self-examination in the first few years. These teachers questioned which procedures were appropriate for children, those with which they had formerly felt secure or those they were now struggling to implement. These teachers labored to describe a long evolutionary process they experienced. In spite of the roller coaster of emotions the teachers l

interviewed were experiencing, none wanted to abandon cooperative paradigms. "I had to learn along with my class, but I felt so good about learning that I stuck with it and didn't conform to what everyone else in the building was doing," voiced a teacher. (Interview 7)

Although these teachers each had at least one colleague somewhere who was using cooperative structures, they longed to "search out somebody" or "be in a place that has this type of environment." (Interview 8) Teachers spoke often of feelings of isolation as they tried new strategies and uncovered exciting ways of looking at learning without being able to share their discoveries with teachers in their immediate surroundings.

Sometimes teachers thought cooperative learning structures would not work for them the way they had for their friends. In the sixteenth interview, this teacher summed up those feelings when expressing, "I'd say, 'It isn't going to work for me like it did for Ann. She's a genius.' Yet it did seem to work right from the beginning." Another teacher was startled by success, "I didn't know if it was going to work. It seemed they were a little young. I really was surprised when I saw how the students started to work." (Interview 18) A teacher was concerned about people visiting her classroom, "At the beginning if a teacher came in to observe me, I was up tight and worried that I wasn't going to do things right." (Interview 1) Another teacher was surprised at her newfound flexibility, "This is something I have never done before, because I could never think how to pull it off." (Interview 7) One teacher

reflected, "It is much easier for children than it is for adults who have spent their whole life pitted one against the other." (Interview 6) In this study, the teachers liked having another classroom option in their teaching repertoire. Two of the teachers with less than three years experience using cooperative learning structures reported some successes and an increased comfort level, although they have not yet reached their optimal comfort levels with the new structures.

*The initial experiences of the teachers in this study brought back familiar memories of my own first ventures into the use of cooperative structures. I remembered hoping no one would come into the classroom when we were reconfiguring classroom groups from straight rows of chairs. I knew that both cognitively and affectively I was on the right course for me and my students, yet I felt so uncomfortable that I did much of the group work in a sort of secrecy. This was the early nineteen eighties and cooperative learning was not yet a buzz word. It was only after I took a formal cooperative learning course that I finally had a supportive network of teaching associates for what I hoped to do. I remember convincing two of the teachers in my building to study cooperative learning with me and finding grant money to support our study and networking. We were like three secret agents on a covert mission. We talked in whispers about strategies we tried in our classrooms.*

*For my colleagues and myself, it took about three years to reach a comfort level that reestablished our equilibrium as teaching*



*professionals. Now we were able to hold information session for parents and our colleagues. The term "cooperative learning" began to be talked about in our building long before it was being used frequently in educational circles.*

*The experiences of the eighteen teachers in this study, as they began using cooperative learning structures, replicated my own experiences and that of my colleagues. Their insights are also supported by the advice of David and Roger Johnson and Spencer Kagan, who tell trainees to start out small and expand as you become comfortable with cooperative structures. They advise that it takes about three years to be fully comfortable with the implementation of cooperative structures, even though you may cognitively understand them. Since cooperative learning involves structures for lessons, not necessarily curriculum linked lessons themselves, it takes time, for teachers who are truly dedicated to change, to understand and develop this cooperative process before implementation can be brought to an automatic level of classroom functioning.*

**Teachers with experience in using cooperative learning models talk about themselves.**

As these teachers used cooperative learning structures over longer periods of time, they became more confident. "I feel better about myself as a teacher," one person related. (Interview 1) "I really felt like I got somewhere," said another. (Interview 7) Still another remarked, "I

am much happier." (Interview 2) A teacher talked about a change in her role as teacher, "I'm more of a facilitator." (Interview 1) She was also more at ease with people observing the cooperative process, "I'm more comfortable with people observing the class during cooperative activities."

Sometimes teachers' feelings about themselves were tied to their feelings about how the students were faring. "I feel better, because I find the kids seem to like school more." (Interview 1) In interview six a teacher discovered, "Through cooperative learning I've learned that it is important to teach social skills. I'm getting to know the child more as a whole." The teacher in interview two expressed, "Because they do better, I feel better." The fifth interview brought another discovery, "I had to move to understand that this was an important piece, because it gave them time for cognitive elaboration. I am convinced now that teachers do not do enough of that in their classrooms." The seventh teacher I interviewed remarked, "The kids are so much fun when you teach this way." Another reflected, "It's more child centered instead of teacher centered. I get very excited, especially when I see children taking increased academic risks. I hate to think about what happened to children who had learning difficulties before." (Interview 8) In the thirteenth interview I heard, "The children are very capable. We did not allow them to stretch before." The teacher in interview fourteen put it this way, "We didn't have enough trust in students before. Eclectic groups work better. I can really see right brain learners and divergent thinkers

drawn to this model." In another interview this teacher revealed her discovery,

"When my students got finished with their latest project, they decided it was the hardest thing they had ever done, but also the most wonderful. Well, I had never done anything like it before either, and it was the hardest and most wonderful thing I had ever done too." (Interview 18)

Teachers looked back and reflected. "When I taught I never stepped back and looked at what I did. I think I've grown a lot," was revealed in interview one. "I'm working smarter now," said the teacher in interview two. The fourth teacher explained, "Cooperative learning has dramatically changed my entire teaching. I like the results I see. I think I am doing things in ways that are fair for them." The seventh teacher revealed, "I had to learn along with them. I learned so much from them." Another revelation came from my eighth interview, "I have taught for twenty-one years, and I would say that, with my classroom expansion of cooperative learning, the past four years were the most exciting years of teaching." The teacher in interview fifteen was exuberant, "It really works for me. It's just extraordinary - beyond extraordinary." Another teacher put it this way,

"I don't think anything has challenged my own perception of what a teacher is as much as cooperative learning. I can't imagine what my class would be like without it now. It's become second nature to me. I think the first teacher who ever taught must have used pairs. It must have been used in one room school houses with older ones helping younger ones. I could not go back, and I know the kids couldn't either." (Interview 16)

The amount of time teachers put into planning has shifted. "I don't think I spend any more time now than I used to, but the emphasis of what I work on is different," commented the second teacher. The way these teachers use their time has changed as well. "This format frees me to teach a small group and give them the kind of attention they need and didn't get before," said the third teacher. "Once you get cooperative learning going, it's not more work. What other teachers do is more work, correcting papers all day long. I spend as much time but prepare an interesting lesson we can do cooperatively," I heard in interview seven.

#### **Advice from teachers in this study.**

Since none of the teachers in this study felt that they would want to reverse the course that led them to cooperative learning, they offered much advice about persevering. Overwhelmingly, these teachers advised anyone who is implementing, or increasing their use of cooperative learning strategies in the classroom to go slowly. What they have all learned is that, like any complicated process, it takes a good deal of time to conceptualize what cooperative learning means, as well as what it does. Again all respondents in this study suggested that neophytes enlist the support of other educational professionals and not try to "go it alone." In one voice they felt teachers needed the experienced advice of other teachers, a source for previously constructed materials and cooperative learning resources, and emotional support. "Do not reinvent the wheel," was a clear message from teachers in this

study. Sometimes these teachers described their experience with cooperative learning as a long, sometimes arduous, journey - one often fraught with self-doubt.

The teachers I interviewed found that administrative support was extremely important. When administrators lead the cooperative movement, teachers were free to work on strategies, materials, building social skills in the classroom, and networking. Without administrative back-up, the teachers had to educate parents and colleagues alike, often in a hostile environment.

None of the teachers in this study received any preservice training in cooperative learning paradigms, which brought them to the teaching profession heavily invested in individualistic and competitive structures. A need for further study exists to determine whether preservice education continues to ignore the third structure for classroom learning, cooperation.

Another area that warrants investigation is how to reconcile the different agendas that appear to be present among an educational community of administrators, parents, teachers, students, local residents, and political groups on the state and national levels. If American's political policy continues to stress competition and does not work to address social inequities and inequalities, all efforts individual teachers make may have limited results. The teachers in this study realized that using cooperation in competitive and individualistic environments does not model the true spirit and intent of cooperative learning paradigms.

**Summary.**

Uniformly, the eighteen teachers in this study, from various settings and personal backgrounds, were positively affected by their experiences with classroom implementation of cooperative learning. They reflected on their successes and failures and shared insights into their own difficulties and those arising from their educational setting. Teachers described personal shortcomings and reported how their settings inhibited or encouraged intellectual growth for them. Those who had three or less years experience with classroom implementation of cooperative learning reported being well on their way to changing their practices as teachers. Those who had been using cooperative structures in their classrooms for over three years described dramatic and permanent shifts in their concepts of what constitutes teaching as a profession, how classrooms should be organized, what students need to be taught, how teacher/student and student/interactions should be structured, and why teachers teach.

The reasons teachers in this study gave for contemplating changes in their teaching practices were complex and unique. The factors influencing their decisions were combinations of personal and institutional factors.

Training these teachers received varied greatly. The most effective training programs were long term, supported within the system, and connected to some type of follow-up during classroom

implementation. The least effective were short inservice workshop programs that provided no connection to classroom implementation.

Classroom implementation varied according to teachers' styles, personalities, and individual philosophies. The more reticent the teachers, the more slowly and cautiously they proceeded. The more aggressive and confident the teachers, the more boldly and independently they surged forth. There was little variability in ways these teachers originally determined group size. All teachers started with the smallest groups appropriate for the cooperative model they chose. Teachers starting with the Johnsons' or Kagan's model started with pairs. Teachers who began with the Slavin model used foursomes.

There were wide variations in decisions regarding classroom materials, teaching of social skills, and issues of documentation and/or assessment. Teachers who used the Slavin model did not need to make material, unless they wanted to have supplementary posters or charts that directed children as they followed Slavin's prescribed format. Teachers who used the Johnsons' and/or Kagan's model and made materials were influenced by two factors: whether there were materials available for specific subjects or levels and what materials were needed for the teaching of social skills. Foreign language teachers and teachers of young children reported a lack of available materials.

None of the teachers in this study had formally taught social skills before, but they differed as to the extent and type of materials needed. Most teachers developed materials that explained or reinforced role

responsibilities for individuals working in groups. About half of the teachers in this study devised some sort of group processing form to elicit feedback from student on the group process and to report to students on their own perceptions of how groups were functioning in the classroom.

Documentation of changes in the classroom and methods of assessing student growth were major areas of divergence. All of these teachers felt an overwhelming obligation to document differences between the ways students in their classrooms progressed before the implementation of cooperative learning structures and after. Formal and informal assessment tools were used, in addition to new avenues of documentation. Formalized publishers' chapter tests and yearly standardized test scores were recorded for students. Grades on informal teacher assessments, portfolios of student's work, and samples of projects were gathered. In addition, a few teachers conducted taped interviews of students to determine their perspectives on the use of cooperative groups in the classroom, videotaped their classrooms during cooperative activities, or corresponded with their students through the use of journals.

All of the teachers in this study were from school systems that still employed normative measures to assess student growth. Though many of the towns were taking steps to ensure that teachers and students were exposed to change, these systems were highly invested in sorting and classifying individuals, as is indicated by their commitment to graded assessment of students based on standardized tests and publisher



developed tests linked to texts. Teachers too were concerned about their own evaluations, which seemed to pit teachers and their teaching styles one against the other. The basis for normative data supports competitive models. If teachers, community members, and administrators are to seek avenues for transforming schools, they must pause to consider how we judge how successful we are. More thought must be given as to how to document, assess, and report growth of individuals and systems. Teachers in this study made giant steps in this direction. They had massive amounts of documentation that took many forms. Unfortunately, this information was used more as additional information relayed to parents. Teachers were still tied to traditional assessment practices. Often there was no mechanism in place for passing this information on to others in the school systems.

Teachers in this study described their interactions with students and adults connected with their educational community. Teachers made it clear to the children that they were heading in a direction that would be as new for them as for the students. In their interviews, teachers described the uneven steps, forward and backward, they took in their cooperative classroom group activities that involved academics, interpersonal skills, and documentation. The longer teachers spent with cooperative models, the more comfortable they became with cooperative structures, the philosophy behind them, and their implementation of the structures.

In regard to parents, this group was split between those who saw parents as a problem for them and those who didn't. The teachers who perceived their dealings with parents as problematic appeared to be new to cooperative learning, to receive little collegial or institutional support for cooperative paradigms, and/or to be more reticent. Those who had little difficulty dealing with parents tended to be long time users of cooperative models, to have institutional and collegial networking supports, and/or to be more assertive.

Teachers' relationships with administration varied also. Although unanimously these teachers wished that their administrators had more first hand knowledge and understanding of cooperative learning paradigms, there were striking differences among their school systems. One system supported the entire educational community in their quest for understanding of cooperative paradigms. There was a clear indication that system-wide all community members were linked in cooperative efforts. Incentives were offered to teachers for training; school committee members and administrators were encouraged to participate and interact with teachers in training; follow-up peer support was encouraged; parent informational sessions were conducted and led by a diverse group of school staff; and a cooperative spirit was modeled for children. Staff from this town admitted that their system was not perfect but agreed that change was proceeding in a positive direction. In the other school systems teachers occasionally spoke about one positive relationship with

either a principal or staff member from the central office. None of the these systems offered institutional incentives or structured peer supports. Often, the teachers were left to implement cooperative strategies and defend their decision to fellow teachers, parents, and members of the administrative staff. About one quarter of the teachers in this study reported that they perceived their environment as hostile.

The self-reflections of teachers in this study yielded many positive results. All of the teachers reported that they had made the right decision for themselves in undergoing the transition to more cooperative classrooms. Regardless of uneven progress, false starts, or antagonistic surroundings, each teacher was pleased to have moved in what they considered a positive direction. No one expressed any desire to retreat. Every teacher reported philosophic discoveries whether small or large. Each considered themselves a better teacher than they had been previously. Within this study teachers were committed to and were embarked on a passage. Along this road, each teacher was in a different place upon a spectrum of passage that was dependent upon the individual's plans, comfort levels, styles, and time constraints. No teacher doubted they would reach the destination for which they had originally aimed, but now all knew their arrival would merely be a resting spot for a continuing passage. Without conscious intention or specific planning, this group of teachers found themselves on a path of dynamic and constant progress. It was an unexpected consequence of a cognitive shift that they had each begun to experience.

Results from this study supported evidence from meta-analyses of cooperative learning research indicating that increased educational achievement, interpersonal skills, tolerance for students' individual differences and diverse backgrounds, and self-esteem can be linked to cooperative learning models (Johnson et al, 1981; Slavin, 1991b). Although this study was limited in both its scope and applicability, enough support exists to indicate that future research needs to address how educational policy can be influenced in regard to the use of cooperative structures in schools. Teachers, independent of their school system, will be limited in the amount and quality of change they can influence in educational circles without institutional supports. Institutions that provide preservice education for teachers, local school systems, and agencies that construct political policy must join with teachers, administration, and parents to address issues regarding quality schools, shared community decision making in regard to education, connections between educational research and policy, continuing professional reflection with appropriate shifts in education environments, and equity and equality for children in the schools of America.

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Teacher Interview #7, interviewed by author, tape recorded, Weymouth, Massachusetts, April 12, 1994.

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Teacher Interview #18, interviewed by author, tape recorded, Weymouth, Massachusetts, July, 19, 1994.

## CHAPTER 5

### CONCLUSIONS AND APPLICATIONS OF RESEARCH

This researcher asked a sample of kindergarten through twelfth grade public school teachers to talk about what they experienced when they trained in cooperative learning paradigms, used cooperative structures in their classrooms, and interacted with others in their school communities as they implemented certain formal cooperative learning models. The goal of the study was to know more about what teachers did, what they felt effected their experiences, how they perceived their students and school communities responded, and what developmental cognitive shift in their educational philosophy they experienced in terms of their participation in cooperative learning.

This dissertation inquiry was set in the context of school reform, educational administrative management, and the professional development of teachers as they are informed through learning and experience. Generally, both individuals and organizations undergo ongoing and continuous change and reorganization of their perspectives as they encounter unique experiences and historic influences.



This inquiry was conducted by interviewing teachers. The concern was to come to an understanding of how teachers describe and interpret a cognitive shift within themselves as they implemented formal cooperative learning models, and the impact these transitions may have had on others in their school environments. The oral history interview was a qualitative instrument used to structure conversations about teachers' experiences with cooperative learning models.

The focus of the research design was to listen to various teachers relate their experiences and tell, in their own words, about their understandings, so as to represent the teachers' perspectives from a practitioner's viewpoint. This emphasis emerged from a gap in literature that describes current knowledge about the implementation of cooperative learning structures from teacher practitioners. Research and empirical information thus far focused on the student. This dissertation inquiry emphasized the teachers' perspectives of interactions within the framework of cooperative learning paradigms, since much of what occurs in these classrooms models transpires through student-teacher and student-student interchanges, and much of what teachers attempt to accomplish may rely on interactions with others in school and community surroundings.

The findings of this research can be described in four areas: the type and quality of cooperative learning training, the translation of cooperative learning training into practice by teachers, the influence of other people or factors in the educational community on teachers as they

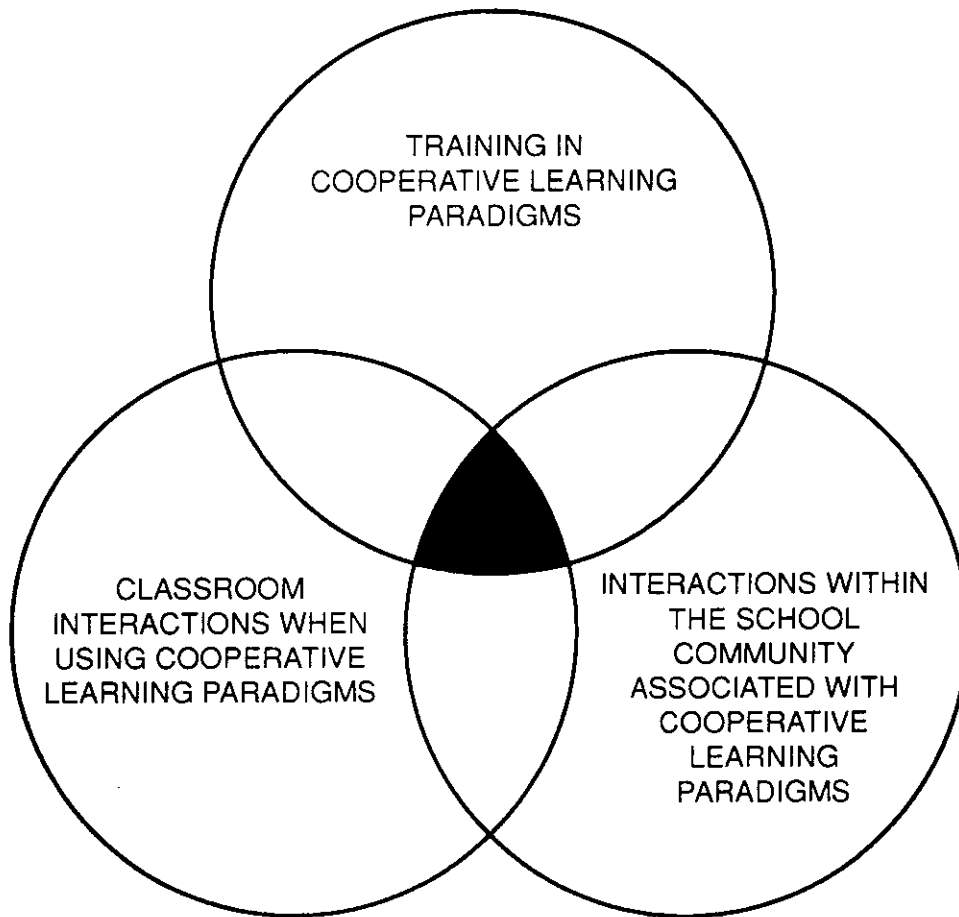
attempt a shift in practice, and the changes that teachers describe within themselves that they feel have been influenced by their use of cooperative learning paradigms. The influence of these teachers' training, their classroom experiences, and their interactions with others within their school communities creates changes within the teachers themselves. (See Figure 1).

### **Type and quality of cooperative learning training.**

The analysis of the interview responses around the issue of training indicated several things. The teachers' responses reflected variations in training experiences; their cooperative learning training differed in type, duration, and quality. Further variance occurred due to the mandatory or voluntary nature of their training. Another variation surfaced between a group of teachers whose training was accompanied by follow-up and those who received no additional services.

The research findings in this dissertation strongly supported voluntary cooperative learning training of longer duration, preferably graduate level courses, that focused on a specific model rather than a combination of cooperative models. Training that included either classroom follow-up or mentor/peer partnerships appeared to be most beneficial. Transfer of training to practice was facilitated by school systems that offered teachers incentives and/or supported implementation of cooperative structures on the classroom or whole school level. Indications from this study were that teachers understood

Factors Influencing Developmental Cognitive Shifts for Teachers Using Cooperative Learning Paradigms



\* The shaded area indicates the integrated understanding that constitutes developmental cognitive shifts for teachers created through the interaction of factors teachers experience when implementing cooperative learning paradigms

Figure 1. Factors influencing developmental cognitive shifts for teachers using cooperative learning paradigms.

and retained little from in-service workshop presentations of cooperative strategies emphasizing specific aspects of several cooperative models. These overviews were introductory in nature, focused on discrete skills, and made no attempt to influence an adoption of the philosophy of the new paradigm.

The research findings from this study indicated that the expertise of cooperative learning trainers and quality of their presentations may affect teachers' understandings of cooperative structures and their use. Understanding and transfer of training to classroom practice seems to be facilitated by trainers who used a hands-on approach and directly assisted teachers to: prepare materials for classroom use, locate model lesson plans in their disciplines, access research for further reference, and network with others when classroom difficulties arose. However, the nature of the training may not have been as significant as the influence of cooperative structures themselves in changing the school culture from one of isolation to a talking, sharing environment.

The findings from this research study strongly connect with the only research study in the literature dealing with the effects of in-service workshop education of teachers in a cooperative learning paradigm on their classroom implementation, a single case study that examined the application of in-service education targeting the Slavin model of cooperative learning (King, 1993). Of the eleven variables in the King study that influenced effective in-service education, this study supported the results showing that hands-on involvement, common professional

interest, voluntary participation, and coaching were key elements needed. The restriction of the King study to the Slavin model and the limited scope of the study suggest that further research into effective in-service programs targeting a variety of cooperative models may be indicated.

### **Translation of cooperative learning training into practice by teachers.**

The vast body of literature comparing cooperative to individualistic and competitive paradigms in classrooms focused on students, and most frequently on the academic achievement of students. Studies quantified students' improvement in academics, increased interpersonal relationships, and higher degrees of tolerance and friendship among diverse groups of students. That research recognized the powerful effect student/student interactions exert on children in cooperative relationships.

Although the effect of cooperative models on students was not the focus of this study, the analysis of the interview responses indicated several areas that supported previous cooperative learning research. As predicted in the literature, teachers were highly invested in assessing and documenting students' academic progress, increased interactions and friendships with other students in the classroom, and their tolerance for interacting with students who held diverse points of view. Findings from this research indicated that teachers perceived these areas to be

positively effected by students' involvement in cooperative structures. The research in this study strongly connects with both the classroom implementation patterns of teachers and the academic and social benefits to students reported in the literature. It supports research that indicates a positive effect on students' self-esteem, interpersonal relationships, liking for school, and increased ability to take risks.

The findings in this research provided unique views pertaining to two controversies that currently exist among cooperative learning researchers themselves and between these researchers and social psychologists. The issues raised were the effectiveness of cooperative paradigms for gifted students, and the use of a reward structure in Slavin's model and its effect on intrinsic motivation.

In cooperative learning research much controversy exists in regard to the ability of gifted students to benefit from cooperative learning structures. Teachers' responses in this study indicated that the effectiveness of cooperative learning activities to meet the needs of gifted students may have more to do with the skill of the teacher in structuring cooperative activities that provide sufficient latitude for the diverse talents and interest of the group than it did with the model itself.

A long standing debate between Robert Slavin and Alfie Kohn has focused on the use of award certificates in the Slavin model, which Kohn suggests may inhibit the development of intrinsic motivation in students (Slavin 1991, Kohn, 1991a, 1991b). For the teachers in this study, reward systems were either mandated, because of the school system's

choice of the Slavin model, or initiated by the teacher. Within this study, there were no indications that reward systems inhibited the development of intrinsic motivation in students. The teachers in this study reported that students' motivation remained high within cooperative learning groups, regardless of the model implemented by the teacher.

The literature that addresses the use of intragroup cooperation and intergroup competition in the Slavin model is marked by controversy. Little evidence surfaced in this study to support or refute either sides of this issue. This study did support previous research indicating that mediating and moderating variables applicable to goal structures have yet to be identified.

The analysis of interview responses highlighted a discrepancy between the cooperative atmosphere of teachers' classrooms and the individualistic and competitive nature of the school systems in which teachers taught. These teachers had spent much of their teaching day in relative isolation with little or no professional contact with their colleagues. Top-down administrative structures perpetuated relationships with teachers that limited the teacher's influence over major change initiatives, as well as the administrator's ability to guide teachers through self initiated changes. Within their classrooms these teachers modeled cooperation but were forced, by the nature of the system, to act in individualistic and competitive ways within their larger educational communities. The interview responses of these teachers highlighted a

need for researchers to take a more rigorous look at the impact a competitive American climate has on teachers in classrooms.

**Influence of other people or factors in the educational community on teachers as they attempt a shift in practice.**

Analysis of interview responses revealed that a number of factors influence teachers who are attempting shifts in classroom practices. The attitudes of the children's parents, the views of colleagues, the support of administrators, and the culture of the school and society are strong forces that impacted these teachers.

As predicted in the literature, when school systems adopt the Slavin model, teachers have little interaction with others concerning the philosophy or appropriateness of cooperative models. For this group, informational sessions were conducted on the school or town level. This study supported the literature indicating teachers who adopt cooperative paradigms on their own often have to deal personally with opposition from parents, administrators, and/or their colleagues. A finding from this research, not predicted in the literature, is that when teachers have less than three years of experience using cooperative structures in their classrooms, difficulties with parents, colleagues, and/or administrators may have more to do with their own inexperience than the models themselves. The results of this study may signify the need for research that differentiates between experienced and inexperienced teachers' use



of cooperative models and their interactions with others regarding cooperative practices.

Findings from this study strongly connect with the research indicating that there is unresolved controversy among parents and educators concerning the appropriateness of cooperative learning models for gifted children. The literature fails to predict whether the teachers' skill in meeting the diverse needs and special talents of some children influences the appropriateness of cooperative models for these children. Future research may be needed to address this issue.

As teachers in this study attempted to shift their classroom emphasis from competitive and individualistic to cooperative, some received administrative encouragement and support; some did not. The literature failed to predict how principals affect the teacher's implementation and continued use of cooperative learning paradigms. Considering that this is an era when many areas of American society are demanding educational reform and calling upon schools to address social issues, the findings of this study support the view of Ferguson (1980, p. 139) that, "The true leader fosters a paradigm shift in those who are ready."

The responses in the voices of the teachers in this study failed to support Kohn's argument that the reward system in the Slavin model inhibits the development of intrinsic motivation and supported Slavin's view that recognition by the peer group is what is critical in this model. However, this study did support the literature indicating that schools are

highly competitive and individualistic places which mirror the extremely competitive nature of American culture.

**Changes within themselves teachers perceive have been influenced by their adoption of cooperative learning paradigms.**

Adult development concurrently accounts for both generalized patterns of understanding and individual variations. Construction of adult knowledge is further influenced by time and experience.

The analysis of the interview responses indicated areas of similarity and differences among these teachers. As predicted in the literature, during the initial phase of implementation teachers: expended significant time and effort making materials for cooperative activities and teaching social skills; experienced minor conflicts with parents, colleagues, and/or administrators; dealt with uncertainty around issues of giftedness; and were impeded by the predominance of individualistic and competitive models in their schools and society. What was not addressed in the literature was the seeming ineffectiveness of single presentation in-service models to train teachers in the use of cooperative learning models, the strong need for ongoing peer and/or system support throughout the implementation period and beyond, and the isolation felt by teachers who experienced paradigm shifts in school communities that adhered to more traditional models.

The findings from this research strongly connect with adult development literature indicating that experienced teachers seek validation for their teaching in outside experiences and craft different relationships with their peers. Responses from teachers in this study confirmed two of King's (1993) findings: common professional interest and voluntary participation are critical to effectiveness of in-service workshops dealing with Slavin's cooperative model. Implications from this study indicate that those who plan professional development activities for experienced teachers need to be cognizant of adult development theory and the power of peer collegial relationships for this group.

The responses of these teachers in their own voices supported the literature indicating that teachers often work in isolation and are seldom asked what affects them in their workplaces. Additionally, these teachers substantiated research suggesting teachers exert little influence on school systems in their communities. Implications from this study indicate that if school reform is to be effective, teachers need to be included in far more comprehensive ways.

### **Implications.**

As discussed in Chapter 1, schools are being challenged to transform the way students learn and teachers teach in anticipation of a twenty-first century with dramatically different expectations for both of these roles. While undergoing shifts to cooperative paradigms, these

teachers described and interpreted experiences that they perceived influenced comprehensive and permanent changes within themselves and that affected what and how they teach. As Oliver Wendell Holmes once said, "Man's mind, once stretched by a new idea, never returns to its original dimensions."

The work of this dissertation was to look at teachers as they learned themselves and as their teaching reflected their new understandings. When examining teachers' changes in their own learning and practice, their role in the school community, their interactions with others in their systems, and the long term influences paradigm shifts have on them as individuals became important foci for the study.

In the historical sense, schools were structured after industrial models to be efficient delivery systems for the education of the public. In reality, those parameters left students and teachers with little power to problem solve and effect changes needed to meet the needs of the future age of technology.

As school systems struggle to implement change models, care must be taken to ensure that the needs of those who will be required to implement new paradigms, the teachers, are considered. Additionally, administrators must be well informed, not only in administrative procedures but in classroom practices, to supervise effectively and to lead change initiatives for teachers. The role of the administrator becomes less authoritarian and more facilitative in nature as teachers

participate in school based management models alongside their principals and community representatives. Any mandated system change may otherwise be met with overt or unconscious resistance to any shift in practice. I believe that support for teachers needs to be long term and continuous, if they are expected to understand and adopt the philosophy of change models, commit themselves to ever shifting quality management of their classrooms, and be meaningful participants in activities within a school culture dedicated to continuous improvement.

Further, it can not be assumed that teachers who cognitively understand the skills involved in any new model will be able to successfully implement or maximize the effectiveness of these models in their classrooms. In this study, it became apparent that these teachers adapted the models based on their own developmental stages and the age and experience of the learner. The quality of training, time, experience with the model, and the teacher's own skill and confidence influenced the quality and effectiveness of the model's transfer to the classroom and the ability of the teacher to interact with others in the school community around the issue of change. For them, change occurred over a flexible cycle that lasted about three or four years. In the first stage, these teachers' tested out cooperative activities in a tenuous manner and stayed true to essentially one model. They were hesitant to be observed by others. Within the second stage, these teachers revisited their initial ventures to revise and improve their cooperative practices and experiment with other cooperative models. They were less concerned

with being observed. In the third stage, these teachers implemented cooperative activities from a variety of models in a more comfortable and adept manner. They welcomed observation and feedback from others and sought to observe the cooperative classrooms of their colleagues. It was at this point that the teachers recognized a cognitive shift in their own educational belief systems.

Once these teachers had experienced a shift in their educational philosophy, they express a need to take on new responsibilities or utilize their skills in different ways. They sought connections with other teachers within or outside their school systems. Often these teachers welcomed mentoring or peer relationships. Systems need to construct new roles for teachers within schools and within a society in flux.

Issues that surfaced in this study sometimes transcended the study of a model. Quality training, in and of itself, may not produce the outcomes desired by the school system. I have inferred from the data that interpersonal skills and confidence levels of the teachers influence the transfer of theory to practice. Constructivist activities enable the learner to interact with new experiences as they are guided to understanding, based on their own levels of cognitive development. When assimilating new understandings, teachers can benefit from the same structures as their students. On the preservice, in-service, and professional development levels, learning for teachers can be optimized by constructing models that better suit the needs of teachers, who will be expected to shape the direction of their teaching to meet the ever shifting

needs of children and society. Rather than rely on the individual teacher to assume the role and responsibility of change agent in the system, school systems may need to expand use of integrated teams of teachers, administrators, and community members to ensure that a safety net exists for teachers, students, and schools as well.

### **Further Research.**

Teacher education, on the preservice and in-service levels, and professional improvement efforts must logically dovetail with school reform agendas. The effectiveness of teachers, within and outside of their classrooms, clearly influences the overall functioning of schools. It can make no sense of change efforts that keep teachers on the periphery of school improvement efforts. Preservice education of teachers, especially, must prepare the emerging teacher to anticipate new leadership roles in their educational community in a milieu that encourages students and teachers to adapt to an ongoing process of learning and productive change.

Teachers can be involved in shifting educational paradigms in several different ways. Change may be mandated by the central administration of the school system and principals charged with the duty of seeing that teachers comply. Teachers may themselves seek to transform practice with or without support from their administrators. School based initiatives may enlist teachers' participation and support in constructing and effecting change. Within this study evidence emerged

to indicate that all three of these models may support some progress for teachers and schools. Some factors that mediate and moderate effective experiences for teachers are teachers' own development, type and quality of training, peer involvement, the setting, and support after training. Future research may be able to look at various models used to influence change and more fully describe the variables in these experiences that provide the most powerful connections between learning and practice for teachers and students.

The research from this dissertation connected teachers' shifts to a cooperative perspective with the influence of a competitive culture in their schools and society. These teachers perceived that competition in their schools and society negatively impacted their attempts to foster cooperation. When expecting teachers to make a paradigm shift, it is essential to examine the general forms that developed in response to one paradigm and examine how supportive they can be in reflecting new paradigms within the school culture. Although the study of competition in America has been widely researched, the influences of a competitive society on schools per se has not been as intensively studied. In schools, more investigation as to how competition affects children's motivation and the advancement of their learning may be indicated. New learning forms do not exist in a vacuum. The fundamental issue is to examine what, how, and why we teach to see how the needs of society may best be served. Once these determinations have been made, educational communities must develop ways to adjust, recognize, and



assess indicators of progress within the learning environment.

The research from this dissertation also connected with issues of the needs of special needs students, as well as the gifted and talented. The variation in the abilities of teachers in this study to meet the needs of both these groups in cooperative models leads to the question of teachers' preparedness to teach diverse groups in any model. Future research might well address a correspondence between the needs of the students and the flexibility of teachers to adapt to the various learning styles of students within a variety of learning structures.

In the future, American schools will need to be examined under an increasing number of lenses to prepare the educational community to interact in a global context. Previous failure of educational research and educational practice to connect in meaningful ways must be addressed. As societal needs increase, schools and teachers will be called upon to fill new roles. In this process, teachers can be of value as action researchers and schools themselves centers of action research.

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**APPENDIX I**  
**TEACHER INTERVIEW SCHEDULE (Pre-study)**

**BACKGROUND**

- A1. What grade do you teach?
- A2. How many years have you taught?
- A3. How many years have you worked with cooperative learning?
- A4. What factors led you to implement cooperative learning?

**TRAINING**

- B1. What training have you received in the Johnson & Johnson model?
- B2. What training have you received in the Slavin model?
- B3. What training have you received in the Kagan model?
- B4. What influenced you to select this/these model/models?

**COOPERATIVE LEARNING MODEL USE**

- C1. What can you tell me about the use of cooperative learning in your school?
- C2. How would you describe administrative support for cooperative learning in your school?
- C3. How would you describe the community's reaction to the use of cooperative learning?
- C4. To what extent do you see cooperative learning being used in your school?

**TEACHER PERCEPTIONS**

- D1. How would you describe changes in your students since the implementation of cooperative learning?
- D2. How would you describe changes in your school community since the implementation of cooperative learning?

- D3. How would you describe changes in yourself since the implementation of cooperative learning?
- D4. What can you tell me about student achievement since the implementation of cooperative learning?
- D5. What can you tell me about students' social skills since the implementation of cooperative learning?
- D6. Describe any other outcomes you attribute to the cooperative learning model.
- D7. What can you tell me about collegial support for your use of cooperative learning?
- D8. What suggestions would you make to others in regard to the use of cooperative learning models?
- D9. Are there any additional comments you would like to make?

Thank informant!

## APPENDIX II INTRODUCTORY LETTER

March \_\_, 1994  
Nancy Mickunas  
19 Hillside Circle  
Hanover, MA 02339

Name of Participant  
Street Address  
City, State Zip

Dear \_\_\_\_\_,

I am in the process of completing my doctoral studies at Lesley College. As part of the requirements for my degree, I am conducting a study of the experiences of teachers who have been trained in the cooperative learning models of David & Roger Johnson, Spencer Kagan, and/or Robert Slavin and have implemented cooperative strategies in their classrooms. My interest in this topic has evolved from my own training, use of cooperative learning structures in classrooms, and experience conducting cooperative learning workshops.

Involvement in this study will consist of participating in a confidential interview. The interview time and place will be scheduled at your convenience.

Because of your high level of commitment to the use of cooperative learning, I am contacting you to participate in this interview. Your participation in this continued research would be greatly appreciated. I believe that this is important work, because it has the potential to gain an in-depth understanding of the experience and perspective of teachers and to improve the services to youngsters in America's public schools.

Upon completion of my study, I would be happy to share the findings of my research with you in the form of a written summary of the analysis of the interviews. Additionally, I would be available to meet with interested groups to discuss the recommendations and practical applications that are generated from this study.

I do hope you will indicate your willingness to participate on the enclosed return form. I look forward to meeting with you.

Thank you very much.

Sincerely,

Nancy Mickunas  
Daytime Phone #: 617-826-6502

**APPENDIX III  
RETURN FORM**

TO: Nancy Mickunas  
19 Hillside Circle  
Hanover, MA 02339

FROM: Name of Participant  
Street Address  
City, State Zip

I will make every attempt to make myself available to meet at a time and place that is convenient to you. This might include day or evening, weekday, or weekend. A return envelope is enclosed for your convenience.

---

\_\_\_\_\_ I would be willing to participate in an interview. Please contact me to schedule a convenient time and place.

\_\_\_\_\_ I would like more information about this research before scheduling an interview. Please call to discuss this project further.

\_\_\_\_\_ I am not interested in participating in this research.

---

**APPENDIX IV**  
**CONSENT FORM: RESEARCH WITH HUMAN SUBJECTS**

Consent Form

You are being interviewed as part of a doctoral level study of highly motivated teachers using a cooperative learning model developed by David and Roger Johnson, Spencer Kagan, and/or Robert Slavin. It is requested that you be as honest and open as possible: you are, of course, free to choose not to answer any specific item or questions. Your identity will remain confidential. In reporting the findings of this study, there will be no attribution of responses to individual participants.

Your participation in this study is greatly appreciated.

Nancy Mickunas



I understand and agree to participate in this study.

\_\_\_\_\_

Signature

\_\_\_\_\_

Date

## **APPENDIX V INITIAL INSTRUCTIONS**

**RESEARCHER:** I'd like to hear the story of your involvement with cooperative learning models. Begin with how and when you started and tell me what happened with your students, yourself, and your school community. Please give enough details and examples for me to understand your journey.



**APPENDIX VI  
DEMOGRAPHIC DATA**

**Demographic Data**

**Interview Number:** \_\_\_\_\_

**Years of teaching experience:** \_\_\_\_\_

**Sex:** \_\_\_\_\_

**Grade level and setting in which you are currently teaching:**

\_\_\_\_\_

**Training:**

**Johnson & Johnson:**

\_\_\_\_\_

**Kagan:** \_\_\_\_\_

**Slavin:** \_\_\_\_\_

**Other:** \_\_\_\_\_

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