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Metacognition and Moral Reasoning

In the Conflict Positive Classroom

by

Roberta Stern Heydenberk

Presented to the Graduate Research Committee

of Lehigh University

in Candidacy for the Degree of

Doctor of Education

in

Elementary Education

Lehigh University

May, 2002

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Approved and recommended for acceptance as a dissertation in partial fulfillment
of the requirements for the degree of Doctor of Education.

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Abstract

The purpose of this study was to determine whether conflict resolution skill development over the period of one school year of training increases students' use of metacognitive strategies and moral reasoning. This investigation was conducted over a four-year period in a low income elementary school in the Philadelphia School District and in two elementary schools in a suburban low income school district in lower Bucks County. Sample subjects were fourth and fifth grade students. Each of the student samples (10 treatment; eight comparison) were reported as group means. The pretest and posttest measures from all treatment and comparison classrooms were pooled and assessed for significant pretest to posttest differences using a one tailed t-test with an alpha level of .05 (Group I). Because significant pretest differences were found between groups for year three in Bucks County, the same analysis was conducted with the eight treatment and six comparison classrooms that showed no significant pretest differences (Group II). In these school settings, treatment group teachers were trained in conflict resolution strategies, and the treatment classes were monitored throughout the duration of the study to ensure classroom implementation of skills learned during training.

The following hypotheses were examined:

Hypothesis I: Conflict resolution skill development will positively affect use of metacognitive strategies.

Hypothesis II: Conflict resolution skill development will positively affect students' moral reasoning.

The Student Attitudes About Conflict standardized scale was administered to treatment and comparison groups to confirm program implementation. Differences between treatment and comparison groups on a one tailed t-test affirmed training effectiveness for the treatment groups at the alpha level of .05. One tailed t-tests with an alpha level of .05 established that treatment group students demonstrated significant improvement in both areas of investigation, metacognitive skills and in moral reasoning. Both research hypotheses were accepted. Consequently, the veracity of integrating conflict resolution into classrooms was affirmed.

Chapter I

Introduction

The creation of conflict resolution programs in American schools has been the primary attempt to curb violence and antisocial behavior in our classrooms. In fact, by 1998 the majority of American schools had mandated conflict resolution programs (Nemecek, 1998). Numerous studies have been conducted on the efficacy of these varied programs, and the findings of these studies are encouraging.

Conflict resolution program evaluations show that such programs not only reduce aggression and violence in communities and their schools, but also provide "life long decision making skills" (U.S. Dept. of Justice, 1997, p.55) and enhance the self-esteem of students. A study conducted by the Center for Law-Related Education (Bodine, 1996) found that most conflict resolution programs reduce time teachers spent on conflicts, improve school climate, enhance problem-solving skills and self-control among students. There have been increases in peaceful problem solving and reductions of over 50% in violence in even the most violent gangs after conflict resolution training (Sherman, Gottfredson, Mackenzie, Eck, Reuter and Bushway, 1997). Significant reductions in destructive behavior are often the case in school settings (Johnson and Johnson, 1996), as well.

Along with positive changes in behavior, improved academic performance occurs when conflict resolution skills are integrated into content areas, improving content comprehension along with conflict resolution skills (integrative

negotiation) (Johnson and Johnson, 1994). There exists a "well-established relationship between academic underachievement and anti-social behavior" (Larson, 1994, p.151). Although the direction of the relationship is not always clear or uniform, in most cases academic achievement is fostered in a conflict positive environment (Johnson and Johnson, 1996). We have strong evidence that conflict resolution programs which provide students with some opportunities for skill development in a cooperative context are related to "significant increases on cognitive skills as indexed by the WISC-R (Wechsler Intelligence Scale for Children-Revised)" (Greenberg, 1996, p. 3; Johnson and Johnson, 1996).

Conflict resolution improves social and emotional skill development, as well (National Institute of Dispute Resolution, 1997). Johnson and Johnson's (1995, 1996) research shows that integrative negotiation skills are almost non-existent prior to conflict resolution training and are often used spontaneously afterward.

Studies of conflict resolution programs often demonstrate positive changes in the classroom or school climate (Koch 1988; Lam, 1989). There are several studies that manifest improved problem solving and increased cooperation as a result of successful conflict resolution programs. The "cooperative spirit goes beyond the classroom" (The Harvard Education Letter, 1991, p.5). The gains in cooperative skills are significant for two reasons. First, in America our "children are often so highly and appropriately competitive that they lose the opportunity to win prizes that require even minimal cooperation" (Phinney and Rotheram, 1988, p.208).

Effects of conflict resolution training may go beyond the social

significance of increased cooperation when we consider that "currently there is no type of task for which cooperative efforts are less effective than competitive or individualistic efforts" (Johnson and Johnson, 1985, p. 114) academically.

Furthermore, students in cooperative conflict resolution environments "hold fewer negative stereotypes" (Lantieri and Patti, 1996, p.26). Again, this is not a simple effect. This anti-bias effect improves integrative thinking for the biased student and may also negate any minority effect for the recipient of such bias. Steele and Aronson's (1995) work has shown that mere salience of a negative stereotype will impair minority students' academic performance. Without first establishing a cooperative context, desegregation in schools may have a negative impact, with students feeling threatened and becoming more prejudiced (Johnson and Johnson, 1981). Johnson, Johnson, Stevahn and Modine (1997) consider "the three Cs of safe schools" (p.8) as cooperative context with conflict resolution and civic values representing a "gestalt in which each component enhances and promotes the other two" (p.13).

A low-threat environment that is characterized by positive affect enhances higher level thinking and creative problem-solving (Izard, 1991; Goleman, 1994 and Slywester, 1995). This environment also enhances our ability to form attachments and build relationships. There are studies of very different schools that are in the same neighborhood with the same population of students exposed to the same high levels of crime, unemployment, drugs, violence, poverty, racism and other environmental risks, but with very different outcomes (Katz, 1997). What determines the difference in these schools is the relationships--"the attitudes and beliefs among administrative and teaching staff at the school fostering the

acquisition of important social and cognitive skills among the students" (p.97). The schools themselves are not different from each other nor are the students attending them different. What is different is their response to conflict and school attachment.

Students' communication skills improve in schools that have effective cooperative conflict resolution programs in place, (Johnson and Johnson, 1995; Johnson and Johnson, 1996). These improved communication and conflict resolution skills help students form prosocial bonds or attachments (Catalano, Hawkins, Herman, Ransdell, Roberts, Roden and Starkman, 1994). When bullies or aggressive students learn conflict resolution skills and skills that allow them to increase positive social interaction, they begin to prefer to form attachment bonds with prosocial and less "deviant" (Gillmore, Hawkins, Day and Catalano, 1992, p., 83) friends.

Research on resilience in children show that strong attachments are perhaps the most important protective factor for a child in a high-risk environment, or any other environment (Resnick, Bearman, Blum, Bauman, Harris, Jones, Tabor, Beuhring, Sieving, Shew, Ireland, Bearinger, Udry, 1997, Farrington, 1990, Baruch and Stutman, 1993, Hawkins, 1995). Extreme poverty and other aspects of a multiple risk environment may be overcome by a students' strong attachment network (Empey and Stafford, 1991). Hawkin's (1995) decades of research has shown that children in multiple, high-risk environments who navigated the risks and became productive, healthy, non-violent "contributing members of the community" often noted the important role of attachment" a parent, an aunt, a grandmother, a teacher, a youth worker, a minister, a business

person--established a bond of affection and are enough to reach out" (Hawkins, 1995, p.14)

Poor affect regulation, poor social skills and deficits in social cue reading" often predict peer rejection, weak attachments and the alienation that leads to academic failures, as well. Crawford and Bodine (1996) state that when a school develops a conflict resolution program, they help students succeed in three ways. First, "resolving conflicts in principled ways promotes and preserves relationships thereby facilitating the bonding that is essential" (Crawford and Bodine, 1996, p. 73). Second, the conflict resolution education helps students control their behavior and make smarter choices. Finally, setting up a conflict resolution program empowers students by encouraging them to solve their own problems rather than having them controlled by teachers and staff. Without a conflict resolution program conflicts can predict "detachment from school and lower grades" (Johnson and Johnson, 1996, p. 482). Within a cooperative conflict resolution program, students are empowered to maintain and create friendships and broadened perspectives of their community.

Increased time on task does not appear to be the most significant factor in determining increases in cognitive performance in the conflict positive classroom. Increased motivation and self-efficacy in a conflict positive environment, as well as increased opportunities to practice authentic problem-solving, are related to gains in reasoning and academic achievement (Dudley, Johnson, Johnson, Mitchell and Wentzel, Weinberger, Ford and Feldman, 1990, Schunk, 1991, Fredrickson, 1997).

Research tells us that students "work harder, achieve more and attribute

importance to school work in classes in which they feel liked, accepted and respected by the teacher and fellow students" (Lewis, Schaps and Watson, 1996, p.141). There is evidence that negative affect and any sense of alienation affects cognitive performance to some extent (Davidson and Worsham, 1992). Testing thousands of students researchers in New Jersey found that feeling like a "definite minority in a group tends to blank out your intuitive ability in that group" (Ostrander, Schroeder, Ostrander, 1979, p.205). The increased sense of belonging or attachment in the cooperative conflict resolution classroom alone may facilitate cognitive gains. In some sense, all students may fall victim to the minority effect in a classroom characterized by alienation and competition. Students in a very competitive environment become more rigid, dichotomous thinkers as a result of working in a win-lose, black and white academic environment (Kohn, 1986). Interestingly, our competitive individualistic environment also creates "rank conformity and dampens creativity" (Kohn, 1986, p. 130). In contrast, in a cooperative conflict resolution classroom, students routinely examine other perspectives reducing the my-side bias that flaws most thinking, regardless of high levels of intelligence (Perkins, 1995).

When students "seek to find the value in each position or idea" (Berman, 1991, p.15) in the cooperative conflict resolution classroom, they learn to engage in "synthesis thinking" (Berman 1991, p.15)--or integrative thinking (Johnson and Johnson, 1996). Rather than focusing on a polarized quick right or wrong response, they broaden their perspectives and begin to synthesize new solutions.

The metacognitive skills necessary to go from an egocentric cognitive perspective to a more allocentric cognitive perspectives are fostered in the

dialogue of the cooperative conflict resolution classroom (Karpov and Haywood, 1998, Gilhooly, Keane, Logie and Erdos, 1990, Costa, 1984, Davis, 1994, Davidson and Worsham, 1992). Students in this integrative thinking environment develop a sense of "self-responsibility" (Davis, 1994, p. 85) that transcends increased metacognition for academic purposes. They begin to consider the way their actions effect others and how others might feel (Johnson and Johnson, 1995).

When studying how children develop a sense of justice Piaget (1997) tells us that reciprocity (p.198) and "notion of justice" (p. 198) "seems to be the direct result of cooperation". (p.1978). Piaget states, "social constraint does not really suffice to socialize the child but accentuates its egocentrism. Cooperation, on the other hand, seems to be essentially the social relation which tends to eliminate infantile phenomena" (Piaget, 1997, p.348). Further, moral reasoning may come from "the work of the community" (Piaget, 1997, p.354) and "attachment to the social group" (Piaget, 1997, p.354). Another "element of morality is the autonomy of the will" (Piaget, 1997, p. 355). According to Piaget a child must have opportunities to decide what is morally right rather than have a set of rules imposed on him arbitrarily at all times. As Kohn (1996) contends, "the more we manage students' behavior and try to make them do what we say, the more difficult it is for them to become morally sophisticated people who think for themselves and care about others" (p.62). Kamii (1984) tells us that children who are forced to obey a rule and punished if they fail to do so without any reasoning are many times more likely to break rules when they are away from parents and teachers. Children who understand the reasoning behind a rule are more likely to obey that rule when alone. Punishment is a poor substitute for reasoning once a

child is developmentally ready to reason and understand.

Opportunities to reason and empathize may be more important than strict rule enforcement in the development of moral reasoning. Kohlberg (Kohlberg, Levine and Hewer, 1983) tells us that "a moral atmosphere is a factor influencing the growth of individual moral judgment through the stages" (p.59). The extent of the moral growth may depend on "the degree to which moral judgment and taking into account others' viewpoints occurred within the school and the extent to which subjects felt a sense of power and participation in making rules" (Kohlberg, Levine and Hewer, 1983, p. 59) as well as whether or not the "existing rules were perceived as fair" (Kohlberg, Levine and Hewer, 1983, p.59). Kohlberg and his colleagues (1983) found that moral reasoning is fostered in democratic settings where students participate in the problem solving and reasoning that affects their lives. Hawkins and his colleagues (Hawkins, Catalano, Morrison, O'Donnel, Abbott and Day, 1992) found that increased participation and school involvement and attachment was related to students' "belief in the moral order", (p.150) and to the students' consideration of others' feelings and the consequences of their actions.

Simply being exposed to others' perspectives often engenders "a sense of moral improvement or social responsibility" (Purdie, Hattie and Douglas, 1996, p. 94) in some students. Although Prothrow-Stith (1994) acknowledges the serious limitations of stand-alone conflict resolution programs, her research shows that when students are in a cooperative conflict resolution classroom they learn "cognitive skills for reasoning, weighing consequences, and making choices...Research...confirms that students with superior language skills and

analytic abilities are less likely to use force to persuade and more likely to use creative and intellectual exercises to imagine and respect differing viewpoints" (Prothrow Stith, 1994, p.11) in the cooperative conflict resolution classroom.

Most "researchers agree that there is some biological disposition toward empathy" (Azar, 1997, p.15) and that the child's "social scaffolding can influence how empathy develops" (Azar, 1997, p.15). The cooperative conflict resolution classroom fosters students' empathy and moral reasoning as well as their social and academic skills.

The research (Johnson and Johnson, 1996) shows that once students have learned peaceful, constructive ways to resolve conflicts they embrace this peaceful integrative thinking in school and on the streets. The conflict resolution classroom gives students more of the tools they need to realize their common humanity and intellectual potential.

Purpose of the Study

The majority of American schools have instituted conflict resolution programs in response to concerns about antisocial behavior of students. Although a host of studies indicate favorable changes, a number of important questions remain uncharted. The purpose of this study was to investigate the effects of conflict resolution skill development on students' dispositions toward metacognition and dispositions toward moral reasoning.

Hypotheses

The following hypotheses were investigated in this study:

Hypothesis I: Conflict resolution skill development will increase students' use of metacognitive strategies.

Hypothesis II: Conflict resolution skill development will increase students' moral reasoning.

Definitions of Terms

1. **Conflict Resolution**: a system that seeks to instill attitudes, knowledge and skills that are conducive to effective, cooperative problem solving and to discourage the attitudes and habitual responses that give rise to win-lose struggles" (Deutsch, 1993, p. 512). The central elements of most conflict resolution programs (Deutsch, 1993, p. 512) include facilitating understanding of the nature of and reasons for the conflict from all perspectives, the ability to "face the conflict rather than avoid it (Deutsch, 1993, p. 512), respect for oneself and the other party's differences and defining the problem as a mutual concern "to be solved cooperatively" (Deutsch, 1993, p. 513). The key skills in any conflict resolution program include active listening, empathy and perspective taking, cooperation, negotiation, expression of feelings in appropriate ways and assertiveness (as opposed to aggressiveness or passivity), including role playing, interviewing...and brainstorming" (Latieri and Patti, 1996, p. 30).

2. **Peer mediation**: a type of conflict resolution" in which a neutral third party helps others resolve a dispute or plan a transaction but does not (and

ordinarily does not have the power to) impose a solution" (Duryea, 1992, p. 6). Peer mediation uses the same integrative negotiation steps as two party conflict resolution negotiations" by which agreement is sought that ensures that both parties fully achieve their goals and that tensions and negative feelings are resolved" (Johnson and Johnson 1996, p. 465): also termed win-win or integrative negotiation.

3. Distributive negotiation: a conflict negotiation "in which the disputant seeks to achieve his or her goal by forcing or persuading the other to yield" (Johnson and Johnson, 1996, p. 465) winning for one disputant at the other's expense--also termed "win-lose" or "forcing" (Johnson and Johnson, 1995, p. 14).

4. Conflict negative schools: schools that "assume that all conflicts are destructive and have no value.....therefore try to eliminate them by suppressing, avoiding, and denying their existence" (Johnson and Johnson, 1995, p. 14).

5. Cooperative context: a school that structures "a majority of learning situations cooperatively (Johnson and Johnson, 1995, p. 25) allowing students "to work in small groups and to accomplish shared learning goals" (Johnson and Johnson, 1995, p. 25).

6. Metacognition: a type of thinking or cognitive "executive control" (O'Tuel and Bullard, 1993, p. 17) that is characterized by "planning, monitoring and evaluating" (O'Tuel and Bullard, 1993, p.7) one's own thinking. Davidson and Worsham (1992) state that students are using metacognitive strategies when they "monitor their own problem solving strategies...and formulate a plan" (p.52).

7. Moral Reasoning: reasoning regarding rights as "defined by the decision of conscience in accord with self-chosen ethical principles appealing to logical comprehensiveness, universality and consistency...At heart, these are universal principles of justice, the reciprocity and equality of human rights and respect for the dignity of human beings as individual persons" (Kohlberg, 1971, p.88).

Chapter II

Review of the Literature

This chapter begins with a review of pertinent literature and research on conflict resolution in American schools. The first part of the chapter features the work of the Johnson brothers and their colleagues. Their landmark studies provide the reader with baseline information and an introduction to many of the terms and concepts found in studies introduced later in this chapter. The other studies show the general findings of school-based conflict resolution research, focusing on the influence on school attachment, school climate, conflict resolution styles, discipline referrals, academic achievement, and peer relations. This review is followed by a discussion of the relationships among conflict resolution, metacognition, and moral reasoning.

It is estimated that 100,000 boys carry guns to school each year (Stephens, 1994). Petersen, Pietrzak and Speakers (1998) investigated school violence and prevention programs in 15 districts within 12 states. Using ethnographic interviews, the researchers found that nearly a third of school personnel felt unsafe and threatened by either students or students' parents. Of the 291 personnel polled 68% had been verbally threatened or attacked and 55% had experienced room property or school damage in the last 2 years. Over 60% indicated that verbal intimidation by students had increased the most during the last 2 years" (Petersen et al, 1998, p. 339). A significant number of students report being afraid at school daily (Batsche & Knoff, 1994). Approximately one-third of those who feel intimidated or bullied will carry a weapon to school from

time to time. Other effects include poor academic performance, increased risk of run-away behavior and susceptibility to suicide (Batsche & Knoff, 1994, Clarke & Kiselica, 1997).

The "lack of conflict resolution skills" (Petersen et al, 1998, p. 339) was cited as a major problem by school personnel. The 77 state and district administrators who were queried indicated that "class action lawsuits due to violence" (Petersen et al, 1998, p. 343) workman's compensation, building repair and security expenses were increasing. Sixty per cent of administrators indicated that "staff training in conflict resolution was under funded" (Petersen et al, 1998 p.343). Numerous prevention and intervention programs had been implemented in the various districts and states. Among the 10 interventions that were evaluated as most effective were peer mediation programs, conflict resolution training and teacher conflict management training.

Recent reports to the U.S. House of Representatives (Elliott, 1998) on violence prevention began the introduction by explaining that "there is little political or even program support for evaluation" (Elliott, 1998, p.1) and "further, the cost of conducting a careful outcome evaluation is prohibitive for most programs, exceeding their entire annual budget in many cases" (Elliott, 1998, p. 1). The third and final reason for the lack of evaluation of conflict resolution and violence prevention curricula cited by Elliott (1998) is simply that most program developers "know intuitively that their programs work" (p.1) and therefore do not require rigorous evaluation. General findings of typical conflict resolution programs indicate reduced aggression, reduced suspension and improved school climate.

Evolution of Conflict Resolution Curriculum and Training

Johnson, Johnson, Dudley and Acikgoz (1994) conducted a conflict resolution training program with 92 students from grades 3 through 6. All children received 30 minutes or more of conflict resolution training per day for 6 weeks. The students were all middle class Caucasian suburban children with heterogeneous academic achievement records. After pretesting students were placed in cooperative groups (pairs) to learn and practice conflict resolution lessons everyday. Several dependent variables were measured. First the frequency and type of conflicts in the classroom data was collected by self-report sheets and teacher records prior to treatment as well as following treatment. Students use of varying strategies to resolve conflicts were measured in five ways:

- 1) Written recall of conflict resolution steps (written retention test)
- 2) The conflict scenario Written Test--all students asked to read two typical conflict scenarios and write their strategy for resolving the conflict scenarios. The student strategies are then classified from physical force or aggression (1 point) to full integrative negotiation and mediation (9 points)
- 3) The conflict resolution role play simulation assessment randomly chosen students are videotaped as they role play conflict resolution strategies. Students receive one point for each of the 6 conflict resolution steps they use.
- 4) Spontaneous transfer of training to school conflict and home conflict measured through a variety of observations, field notes and students' self-report forms.
- 5) Classroom, school, and community climate changes as measured

and/or observed by parents, teachers and school principals. The results of dependent measures were presented descriptively and as percentages. A repeated measure t-test was used to determine pretest-posttest differences on written conflict scenarios and video conflict strategy scenarios. A 1 X 3 repeated measures analysis of variance (ANOVA) was used to analyze written pre and post tests and four month post-post test retention levels. Frequency and types of conflict records were compared, as well. Of the 92 students taking the posttest over 90% remembered the conflict resolution steps with 100% accuracy. The other 10% recalled most conflict resolution steps. In written conflict scenarios 60% used integrative conflict resolution conflict resolution strategies, as compared to 0% on pretest--significant at the .0001 level, as was retention of steps data. Video role plays show significant increases in use of conflict resolution steps, as well. The steps of "expressing feeling, reversing perspectives, formulating multiple agreements were never used before training. Students rarely explained the reasons underlying their position" (Johnson et al, 1994, p.81). After the 6 week of the conflict resolution training 81- 100% engaged in the above steps. The rate of conflict referral to teachers decreased 80%. The conflicts referred to the principal decreased 100%. Classroom and community climate changes were positive including observations such as "personal respect for their opponent" (Johnson et al, 1994, p.815). Personal respect increased even where a conflict was brought to a teacher's attention (Johnson et al, 1994).

Johnson, Johnson, Dudley and Magnuson (1995) evaluated the effects of a nine hour conflict resolution training program on students from six elementary classrooms. Each conflict resolution trained student had a chance to act as a peer

negotiator in their school. Eighty-three untrained elementary students served as a control group.

Twenty-two of 23 teachers in this suburban, midwestern school agreed to participate in the evaluation. Of the 22 who volunteered, half were randomly assigned to either the experimental or the control group. Because of time constraints, the school administration limited the control group to 83 students. A pretest-posttest design was used to evaluate four dependent variables:

- 1) a written recall of conflict resolution steps
- 2) the conflict scenario written tests
- 3) the conflict resolution simulation/role play test
- 4) a teacher and principal interview about the school climate.

Analysis consisted of repeated measures F tests for the conflict scenarios, written recall tests and role conflict plays. 94% of the trained students accurately recalled 100% of the conflict resolution steps after training. Ninety-two percent of the trained students recalled all of the steps at the end of the academic year. Forty two percent of the experimental group used conflict resolution as their major strategy in the conflict scenario test. Another 31% used negotiation as part of their strategy. None of the experimental group or control group students used integrative negotiation on the pretests. Prior to training demanding, telling an authority figure (teacher) and withdrawal were the major strategies on response to conflict.

Increase in the use of constructive conflict resolution strategies on the written scenario was significant at the .0001 level. Significant increases in integrative reasoning were found in scenarios as well ($p < .01$). All teachers and

the principal were interviewed and reported positive changes in school climate.

Johnson, Johnson, Dudley, Ward and Magnuson (1995) conducted a study of 277 students to assess the types of conflicts that arose, the strategies students (both trained and untrained) use to resolve their conflicts and what types of resolutions result at home, in the community and in the school setting. Approximately two thirds of the randomly chosen sample received Johnson and Johnson's nine hour training in integrative negotiation/conflict resolution. All trained students had a chance to use integrative negotiation in a classroom environment and all trained students served rotating roles as a peer mediator.

Data were collected at home and at school for two months following training. The conflict reporting form asked the following: date, students' name, who was involved in the conflict, what the conflict was about, what strategies were used to resolve the conflict and what solution was chosen or occurred. Strategies were rated on a scale from 0 to 12 from most destructive and use of violent physical force (1) to most integrative and just (12). The conflicts were classified using a content analysis based on Deutsch's theoretical typology consisting of five conflict categories:

- 1) control of resources
- 2) preferences (e.g.-what games to play)
- 3) values ("what should be") (Johnson, et al, 1995, p. 834)
- 4) beliefs ("what is") (Johnson et al, 1995, p.834)
- 5) and the nature of the relationship (e.g.. dominance of one over the other, level of affection)

Resolutions were classified according to content analysis in seven categories:

- 1) no solution**
- 2) adult-imposed solution**
- 3) student choice imposed solution**
- 4) student #2 choice imposed solution**
- 5) forgiving**
- 6) new solution (compromise or chosen by chance)**
- 7) student created integrative solution**

All data were coded independently by two coders, blind to condition. The agreement level was 87%. The total number of conflicts was 783: 209 occurred at school and 574 occurred at home. Most (745) of conflicts resulted over preferences and resource/possession access. There were significant differences in the types of conflicts in the two settings. Possession/access were more common (84%) at home compared to 54% at school. Physical and verbal attacks made up 25% of school conflicts and 8% of home conflicts. Using Deutsch's categories conflicts were as follows:

- 41% control over resources**
- 41% differences in preferences**
- 11% differences in goals for the relationship**
- 2% differences in values**
- 5% differences in beliefs**

Determined by a chi-square analysis, relationships and beliefs conflicts were significantly more frequent ($p < .0001$) at school than at home.

When conflict resolution strategies were classified before a training there were no significant differences between how conflicts were resolved at home or at school. The control group did differ significantly from the experimental group during and after training. ($F = 3,775, 23.87, p. 0.001$). The significant increases in use of integrative negotiation strategies after conflict resolution training was as frequent at home as it was at school, although training focused only on school conflicts. Students in the experimental group resolved conflicts more constructively even when not using all conflict resolution negotiation steps (26%= complete integrative negotiation, 19%=new solutions, 25% choosing a single party's choice). In the control group conflicts were resolved by other adult arbitration (23%), one party's preference or force or left unresolved (35%).

Johnson and Johnson (1995) conducted seven studies on the effects of conflict resolution training in 6 schools in two counties between 1988 and 1994. The studies included students from grades one through nine in suburban and urban environments. Most studies used the written recall, written conflict scenarios, conflict resolution role plays, records, observations and questionnaires to establish changes in conflict resolution strategies in trained and untrained students. Across studies 94% of students accurately recalled 100% of the conflict resolution/ integrative negotiation steps. Several months after training the recall rate was 92%. Before conflict resolution training most students in both experimental and control conditions used such strategies as telling a teacher, threats, aggression or withdrawal to handle a conflict. After training 75% to 85% of students used some or all of their integrative negotiation steps to resolve conflict. In the video taped conflict role play measures, students used more

constructive negotiation ($p > .0001$) after training. Eighty one to 100% of students were able to use all conflict resolution steps when given a conflict scenario (Johnson & Johnson, 1995).

In one of the studies conducted by the Johnsons and their colleagues conflict resolution was integrated in a two-week high school English unit. Students were randomly assigned to either integrated conflict resolution English classes or regular English classes. Students in the experimental group studied conflict resolution and analyzed or role played the conflicts of various characters in the novel. Students in the control group spent all their time studying the same novel. In the achievement test at the end of the unit the students in the experimental condition scored significantly higher on the achievement test than did the controls who spent more time studying the novel. As well, parental interest in the integrated conflict resolution program was "significant and positive" (p. 433) and most parents wanted students to have continued training or program involvement.

Johnson, Johnson and Stevahn's (1995) analysis of Dudley, Johnson and Johnson's ongoing conflict resolution evaluation introduced a new dependent variable measure. Students were randomly assigned to negotiating pairs consisting of a buyer and a seller of three commodities--oil, gas, and coal. The profit schedules were manipulated so that the commodity or product which gave the most profit to the buyer would give the least profit to the seller and vice versa. The third commodity benefited each party equally. The arrangement resulted in a situation where there was a possible integrative agreement if each negotiator could make concessions on the commodity that was least important to them and

compromise fairly on the commodity that was equally as important to both. The joint profit attained represented the degree to which the negotiators engaged successfully in integrative negotiations. The individual profit of the least successful negotiation represented the degree to which negotiators had chosen distributive strategies (the lower the profit of the lower negotiators the higher the distributive negotiation rate). Most untrained students negotiated in a distributive way, which resulted in lower joint profit. More integrative negotiations and higher joint profit resulted after training in conflict resolution.

Another measurement strategy introduced by Johnson, Johnson, and Stevahn (1995) focused on an attitudes-about-conflict measure. Students were simply asked to list words they associated with the word "conflict": "Overwhelmingly students held negative attitudes toward conflict--seeing almost no potential positive outcomes." (Johnson et al, 1995, p. 15) at the pretest level. The average untrained student listed seven negative associated words and one positive word. Trained students listed an average of five negative and three positive words on the posttest. Attitudes of the control groups remained unchanged.

Johnson and Johnson (1996) provide a more recent review of conflict resolution and peer mediation program evaluations. In evaluations of peer mediation programs, the sessions were found to successfully and peacefully resolve students' problems most of the time. The rates of successful resolution varied from 58% to a more typical 98%, however most programs report a success rate of 90% or better (16 of 22 program evaluations showed successful resolution 90% of the time , 3 reported 70% or better, one reported 58% and one reported

67% successful resolution rates). In a review of over a dozen conflict resolution/peer mediation programs only one did not report a dramatic reduction in suspension rates (most ranging from 45% to 91%). The numerous evaluations that interviewed or surveyed teachers also contained only one exception in reporting a dramatic reduction in cases of disruptive aggression in the classroom. Most of the reports in this last category were vague teacher "self reports" or "testimonials" (p.493) requested and given by staff who may have wished to see the conflict resolution programs continued making the responses spurious. Most programs also report positive changes in students' conflict resolution attitudes and school climate.

Johnson, Johnson, Dudley, Mitchell and Fredrickson (1997) used a pretest-posttest control group experimental design to assess the impact of conflict resolution training on suburban midwestern middle school students. The experimental group consisted of 116 students from sixth, seventh, and eighth grades. The control group consisted of 60 sixth, seventh and eighth grade students. The treatment group received 25 minutes of "integrative negotiation" (p.13) conflict resolution training each day, three days a week. Training included perspective reversal, cooperative group conflict resolution practice and role plays. Small group discussions were used to teach about the nature of conflict and ways to use integrative negotiation. Trainers were rotated through treatment classrooms. Dependent measures included the "How I managed Conflict" scale and the written "Conflict Scenario" Scale, (p.14). Reliability of the conflict scenario scale was .84. Conflict strategies interrater reliability using Cohen's Kappa was 0.88. Change scores were calculated for both dependent measures.

The change scores of the experimental condition were significantly higher than that of the control condition or dependent measure ($p < .0001$). Eighty eight percent of the treatment group listed 100% of the integrative negotiation procedures on the posttest. Before training two percent of all students mentioned three or more negotiating steps for managing conflict.

Stern and VanSlyck (1986) evaluated the impact of a peer mediation program in New York using a 10 question scale from the Discipline Context Inventory, two self management scales and three scales from the Lazarus Ways of Coping Scale. All mediators and faculty were pretested before training and posttested at the end of the year. The general student body showed no change from time one to time two in school attachment/school climate, attitudes and perceptions. Significant differences were found in peer mediators' posttests. Faculty posttests showed significant differences in perceptions of school climate, school involvement, staff-student relationships and problem solving. Peer mediators scored significantly higher on the posttest morals scale with significant increases in levels of concern for others.

Greenwald (1986) employed a quasi-experimental design to assess the impact of a conflict resolution program in one middle school and an elementary school in Colorado. A pretest and posttest were given to students and teachers, observation of classroom conduct and interviews (formal and informal) were also used. The middle school assessed had only a treatment group, but a control group was available at the elementary school where a single tailed t-test was used to compare groups. Qualitative data were analyzed with "standard content analysis and coding techniques" (Greenwald, 1986, p. 41). Pretest and posttest means

were compared on middle school tests. The assessments measured changes in rates of violence, changes in conflict resolution and communication styles, and changes in attitudes about peaceful conflict resolution and prosocial behaviors.

The data from the middle school reflected little if any program impact, perhaps related to inconsistent and minimal program implementation. However, the elementary school assessment showed improvement in all areas. Prosocial behavior choices and bonding changes were significant at the .05 levels. Two items regarding resistance of delinquent peer influence and problem-solving ability showed significant changes at the .05 level. Items measuring prosocial skills, commitment, labeling and attitudes about deviance showed favorable change, although the change was not statistically significant.

Benenson's evaluation (Lam, 1989) compared two elementary schools implementing a conflict resolution program to two similar schools without such a program. The student pretest posttest revealed significant increases in integrative negotiation skills and in students' attitudes or beliefs regarding their ability to constructively resolve conflict. The conflict managers scored significantly higher than the students who were exposed to the curriculum without the opportunity to act as mediator or the control group students. Unlike McCormick's (Lam, 1989) evaluation, Benenson found more significant changes in students' attitudes than in actual conflict behaviors.

Lam (1989) conducted a review of conflict resolution programs for NAME and the University of Massachusetts. Of the 14 peer mediation program evaluations she reviewed, none used a randomized experimental design and only three used a quasi-experimental design (Lam, 1989). McCormick's one group

pretest/posttest evaluation of a peer mediation program in Arizona found no significant changes on a attitudes about conflict management. However, she did find decreases of 47 to 51% in actual acts of aggression among mediators. Kalmahoff and Shaw's (Lam, 1989) evaluation of a whole school conflict resolution program included interviews of students, staff and teachers, as well as observations, parent questionnaires and a student pretest/posttest. Questionnaires showed a significant increase in assertive skills and slight increases in other negotiating skills. Questionnaires from parents, teachers and staff included "many positive comments"(Lam, 1989, p.8).

Araki, Takeshita and Kadomoto's (1990) evaluation of a peer mediation in Hawaii employed a quasi-experimental comparison group design. There were no significant changes in rates of suspension, dismissal or retention. The mediators resolved 93% of disputes successfully and qualitative data showed all parties found school climate improved to some extent.

Hammond and Young (1991) evaluated the PACT (Positive Adolescents Choices Training) violence prevention curriculum--a curriculum developed specifically for African American students. PACT provides lessons on problem-solving negotiation, peer pressure, refusal skills and communication. The pretests and posttests consisted of video taped conflict scenarios. Evaluators also collected pretreatment and post treatment teacher ratings and self-reports. Office records confirm Hammond and Young's (1991) evaluation showing that verbal and physical aggression and referrals decreased for only the experimental groups over the next school year. The four experimental groups also had fewer juvenile court criminal offenses in the following year than the control students.

Olweus (1991) studied an ambitious program of nationwide antiviolence intervention for grades 1 to 9 in Norway. The program goal was to reduce or prevent aggressive or violent bullying in all schools. The rules for behavior and nonviolent resolution of problems were made clear to all students, staff, teachers and parents through written curriculum, presentations and videos. The quasi-experimental design found that during one year bullying was reduced by over 50% in all grades treated.

Brennan (1992) evaluated the Empowering Children to Survive and Succeed (ECSS) curriculum for primary (kindergarten to second grade) students. The ECSS includes lessons on teachers active listening, conflict resolution steps, problem-solving, communication and self-control. The experimental first and second grades received one 30 minute lesson per week plus supporting games, activities, and discussion sessions for 10 weeks. The third grade treatment lasted for six weeks. The quasi-experimental, non-equivalent comparison group design employed a 45 question interview pretest and posttest to both the treatment group and the control group which was chosen from a nearby school with "similar demographic patterns" (Brennan, 1992, p.7) in academics and socio-economic status. The interview questionnaire assessed students' attitudes and behaviors regarding self-control, learning skills, conflict resolution, diversity and problem solving. The ANOVA showed the treatment group had significantly higher scores on the posttest than on the pretest. The comparison group scores were not equivalent at the pretest or posttest time making the comparison difficult to interpret.

Bretherton, Collins and Ferretti (1993) evaluated the Dealing With

Conflict curriculum in Australian high schools. The non-equivalent comparison group design evaluation pretested and posttested students regarding attitudes about conflict and violence and reactions to conflict scenarios. As an outcome, experimental students were less likely to perceive conflict scenarios in a hostile way and were less likely to resort to aggression and violence in their lives at the time of the posttest.

Stephen's (1993) evaluated the Ohio Commission on Dispute Resolution and Conflict Management programs created by the Ohio General Assembly. Seventeen schools were selected to begin conflict resolution programs with \$1,500 grants. The student mediators "demonstrated improved analytical and communication skills" (Stephen, 1993, p.12) and increases in self-esteem. Only in schools where teachers were actively involved did the whole student body show improvement in conflict management skills.

Gainer, Webster and Champion (1993) evaluated a middle school violence prevention program that first addressed multiple risk-factors (drug use, weapon effect) and then taught students social and conflict resolution skills. Students were assigned mentors to review conflict resolution skills and life-skills. The experimental group consisted of fifth and seventh grade students, from three Washington D.C. schools. The comparison group was fifth and seventh grade students from the same three schools one year later. Experimental students showed significant increases in knowledge about risk factors, however not necessarily a change of disposition (e.g. treatment students rated drug dealing as less dangerous than control group students). However, experimental students were significantly more likely to choose and use integrative negotiation before

choosing violence in social conflicts than control group students.

Louis Harris (1993) studied levels of racism and violence in 10 Boston area schools to assess the effect of Project Teamwork. Project Teamwork uses former star athletes to promote awareness of ethnic, race, gender and conflict resolution issues. A quasi-experimental design was used in 34 settings: "active schools" where Project Teamwork had conflict resolution "Human Rights Squads" (Harris, 1993 p.24), "visited schools" where Project Teamwork has done presentations and "not visited schools"--where Project Teamwork had no involvement (Harris, 1993, p.24). Over 807 surveys that included 106 core questions were collected. The active schools with Project Teamwork conflict resolution training and human rights squads had decreased violence with 85% of students "more likely now to work for ethnic and racial equality", less likely to discriminate" and "less likely to be violent" (Harris, 1993, p.24). Students reported being more aware of their own biases and many (the majority) requested more multicultural education for their school.

Hanson (1994) reviewed the implementation effects of conflict resolution and peer mediation programs in each of 37 schools in Region 11, Dade County, Florida. Beginning in phase one with a student cadre approach to conflict resolution and peer mediation and then diffusing conflict resolution to all students in phase 11, the multicultural Programs Intergroup Relations Specialists facilitated the implementation using the Grace Contrino Abrams Peace Education curriculum. During over 30 support visits to the staff, facilitators and staff managed to train 90-100% of the student body in one third of the 37 schools in phase 11.

Not surprisingly, the schools that had the highest discipline referral rates had the highest level of implementation in most cases, driven by need. These schools also had the most significant drop in discipline referrals. Some measure of which would certainly be suspect as a regression artifact. The schools that had high levels of program implementation, but no previous discipline referral problems were found to have decreases in discipline problems, but not statistically significant decreases. Eighty-six per cent of all referral conflicts were satisfactorily resolved. Students' attitudes regarding integrative negotiation versus use of threats and violence, were positively affected as measured on a conflict scenario strategy scale.

Swan and Poertner (1994) used a quasi-experimental pretest-posttest comparison group design to assess the effects of conflict resolution education in 4 fifth grade classrooms. One class received no treatment, while two rural classrooms and two urban classrooms received treatment. Student surveys included 12 items from the Organizational Communication Conflict Instrument (each OCCI subscale received a Cronbach's alpha of .82) and a written conflict scenario test. The students in the four conflict resolution treatment groups showed significant positive changes on all OCCI subscales that included non-confrontation skills, solution orientation and self-control.

Hamilton's (1994) evaluation of conflict resolution programs over a period of three years found that, by year three, integrated conflict resolution programs were associated with increased grades, increased attendance and increases in completion of homework and assignments.

In 1995 Daniel Kmitta, E. Mulugeto and D. Zorn updated Lam's (1993)

review of conflict resolution programs for the National Association of Mediators in Education. The studies used by Kmitta and his colleagues were identified using ERIC, Educational Index, Psychological Abstracts, Dissertation Abstracts and the Social Citation Index data bases. A final pool of 47 studies were considered for the meta-analysis. Kmitta and his colleagues then developed the criteria for inclusion in their analysis which included studies which stated means, standard deviations, p scores, f scores, p values and "a minimum of a pretest/posttest design on treatment and control conditions" (Kmitta, 1993, p.101) The eight evaluations which were included in the final meta-analysis were all evaluations "which incorporate a broad spectrum of quantitative and qualitative methods" (Kmitta, 1993, p.10) to assess program effectiveness. Most of the studies chosen were unpublished pretest/posttest or posttest only with control group designs. The 36 constructs studied were organized into broad questions: 1) do conflict resolution programs improve school climate? and 2) do conflict resolution programs improve students' ability to resolve conflicts peacefully?

In both categories, Kmitta and colleagues failed to reject the null hypothesis. Although the effect sizes in each category did not reach significance, Kmitta feels that the problem may be that "definitions for the two constructs may have been too general" (Kmitta, 1993, p.18) and the small set of selected studies "all had major methodological problems" (Kmitta, 1993, p.18). Therefore, Kmitta feels that it should be noted that the direction of all effect sizes was positive, if not significantly so.

In North Carolina the Injury Control Program supported a conflict resolution program in an Orange County middle school of over 700 students.

The "Rules for Fighting Fair" curriculum was used to support conflict resolution theory, lectures, discussion groups and role plays. Evaluations showed a decrease in school suspensions of 42%. Three hundred ninety one students took a pretest that yielded a mean score of 16% correct responses. The mean posttest scores were 50% correct answers but only 184 of the original pretest sample took the posttest, and it is not clear how representative this half of the student population might be or how this affected the increase in scores.

The Mediation In The Schools (MIS) program was evaluated at the end of the 1993-4 school year (Carter, 1995). In the evaluation effort data was collected from 63 elementary schools, 33 middle schools and 8 high schools. In the 104 schools evaluated approximately 3000 students and 1600 had become trained peer mediators, Comparison of conflict resolution/peer mediation program schools "reveals a marked difference in knowledge and use of positive conflict resolution strategies and in levels of violence". (Carter, 1995, p.3) The impact on students included higher levels of self-control and self-esteem. Worthy of note, this positive rating applied to negative leaders as well as positive leaders. Surveys of over 1300 students (treatment and control) showed strong differences between groups of trained and untrained students in their knowledge of "constructive conflict resolution strategies and in their attitudes toward conflict and feelings about themselves" (Carter, 1995, p.5). Trained students had more confidence, higher levels of school attachment, higher levels of problem-solving skills and "supporting attitudes" (Carter, 1995, p. 5) for future social and school success.

As part of a longitudinal study, nine conflict resolution evaluation projects in 10 states comprised the Centers for Disease Controls first conflict resolution

study (Powel, Muir, McClain and Halasyamani, 1995). A conflict resolution training was "piloted" (Powell et al, 1995, p.426) at an elementary school in the greater metropolitan Miami area for the Florida Dept. of Health and Rehabilitation Service, Florida Injury Prevention and Control Program the Dade Co. Public Health Unit, the Dade-Monroe Teacher Education Center and the Grace Contrino Peace Education Foundation. The school enrolls 1,700 students, 90% of whom "are members of minority groups" (Powel et al, 1995, p.427).

"The Rules for the Fighting Fair" curriculum was used to teach conflict resolution skills to three classrooms (83 students with teachers who volunteered for the study), while three control classes of 87 students were randomly chosen as a match. Assignment of children to treatment or control classes was also random. Students were given a pretest and posttest which included 10 conflict scenarios. Student responses were classified as 1=prosocial to 4=antisocial using physical force or aggression. School staff systematically recorded aggressive and violent behavior. The pretest-posttest differences were significant ($t=6.15$, $p<.001$) for the treatment groups. The control group showed slight improvement in prosocial conflict resolution attitudes, but it was not approaching significance. Behavior data was collected for a full grading period prior to treatment. Weighted scores were calculated by multiplying the frequency (up to 45 occurrences) of each of five disruptive behavior incidents as follows:

- 1) simple disruptive behavior
- 2) rude and discourteous behavior
- 3) out right defiance of adults and staff
- 4) battering (one student strikes another)

5) physical fights

Students' scores could vary from 0 (no aggression or disruption) to 75 (5 or more incidents of all scaled behaviors). The sum of the weighted scores in the conflict resolution treatment classrooms decreased from 82 to 1. A slight decrease also occurred in the control group.

An elementary school peer mediation project in Baltimore, Maryland was supported by the local health dept., Coppin State College Criminal Justice Program, the PTA and other local organizations. (Powel et.al, 1995, p. 427). The elementary school enrolled 500 students, all of whom were African American. During a two year period 23 girls and 21 boys became trained peer mediators. As well, 11 parents and family members and 13 teachers attended education sessions. Fifteen special agents with the FBI mentored several of the mediators. Faculty and student attendance improved, disciplinary suspensions fell from four per year (prior to peer mediation) to one per year during both study years. Three hundred eleven disputes were resolved peacefully by mediators with 275 (95%) of the agreements being "honored for the remainder of the school year." (Powel et al, 1995, p.428).

Jenkins and Smith's(1995) evaluation efforts for the New Mexico Center for Dispute Resolution began in 1987. The initial evaluation included eight school districts, one Indian Reservation School and one juvenile correctional facility with a total of 17 elementary schools, five middle schools and one high school. All teachers at the elementary level taught a 19-lesson unit on conflict resolution. Additionally, 331 students were chosen to be "conflict managers" (p.1) however the final selection was made by a school staff committee to ensure the criteria of

balancing negative and positive leadership was met, as well as a balance of gender and race. Conflict managers and peer mediators were also chosen for the middle schools and high schools using similar criteria.

Conflict resolution skills and constructive social problem solving were the focus of the program, however "an additional primary goal of the program was to bring about changes in students' attitudes concerning interpersonal conflict" (Jenkins et al. 1995, p.2). The program focused on knowledge of conflict resolution and problem solving, communication skills, self-concept and outlook, attitudes toward violence and conflict and attachment to school and community. The instrument developed by the evaluation team, the SAAC, measured positive, if not significant changes at the elementary school level.

The evaluation team developed the Teacher Attitude Scale, the Student Observation Scale and the SAAC-Students' Attitudes about Conflict. Considerable time and effort was spent on the "development of valid and reliable instruments, foremost among these is the SAAC" (Jenkins et al. 1995, p.3). After establishing reliability and validity of various items with over 1200 students a pretest version, the final 32-item test with a reliability (coefficient alpha) of .83 was given to students--approximately 400 treatment and 400 control students.

The elementary students gained significantly more than the control group on the problem-solving conflict resolution subscale only. At the middle school level treatment group students' gains were significant on three of the SAAC subscales: the School Attachment and Commitment subscale and the Knowledge of Problem-Solving and Conflict Resolution Skills subscale. The one exception was the subscale measuring elementary students' gains on problem solving and

conflict resolution styles. Statistically significant changes were measured at the middle school levels. The high school students also made gains, but there was no control group for this grade level.

Ringenburger and Moller (1996) employed a non-experimental research design to determine changes in a Florida middle school after implementation of a peer-mediation conflict resolution program. During the first year of the middle school mediation program 626 requests for mediation were made resulting in 1,341 students who signed peaceful resolution agreements. Ninety per cent of the students reported that the resolution was still effective one month later. Eighty four per cent of mediation students state they would return to mediation if they had future conflicts. In the year prior to implementation of the peer mediation program 163 students were suspended for violence and fighting. In the first year of treatment suspensions dropped 74%. The authors found increased ability to think critically and problem-solve among mediators and transfer of mediation skills to community use among their unexpected findings in their interviews of students and teachers.

DuRant (1996) and his colleagues compared a more general curricular treatment "Violence Prevention Curriculum for Adolescents" to a more focused conflict resolution curriculum. Each widely used curriculum teaches conflict resolution skills, however the later is almost exclusively focused on conflict resolution and the related skills and development of affective vocabulary. Both programs build social and self-regulative skills by providing information and opportunities for guided practice and feedback as recommended by social cognitive theory. The two middle schools were each randomly assigned to one of

the treatments. The pretest found the 225 students in the two experimental groups similar in terms of their conflict resolution behaviors, skills and attitudes. Both curricula significantly reduced self-reported use of violence, use of violence on hypothetical scenarios and reported violence or violence requiring medical treatment. The focused conflict resolution curriculum was "more effective in reducing the frequency of fights requiring medical treatment" (DuRant, Treiber, Getts, McCloud, Linder & Woods, 1996, p.111).

The Ohio Commission on Dispute Resolution and Conflict Management (OCDRCM, 1997) established comprehensive conflict management programs in 283 elementary, middle and high schools from 14 regional training centers. In 1996 the OCDRCM sent questionnaires to 132 school programs. From the 115 questionnaires returned 65% of staff respondents reported a decrease in time spent in conflict, 6% report decreases in violence and 59% report decrease in disciplinary referrals.

Early evaluations of the Second Step curriculum by the Committee for Children (1988, 1989, 1990, 1992) were quasi-experimental designs with non-randomly chosen comparison groups (chosen from the same grade level, with the same academic heterogeneity, from the same school). Second Step curriculum is developmentally customized with special versions for preschool through kindergarten, grades 1 and 3, grades 4 and 5 and grades 6 and 7. The curriculum provides lessons on empathy, anger management, conflict resolution and interpersonal problem solving. The pretests and posttests included conflict scenarios and interview questions. Experimental group students improved significantly in all categories addressed by the curriculum.

More recent evaluations by Grossman, Neckerman, Koepsell, Asher, Beland, Frey and Rivera (1997) employed a randomized, controlled experimental design to evaluate possible program effects on 790 second and third grade students from 12 elementary schools in the states of Washington. In 49 classrooms experimental group students had approximately 30 lessons on empathy, conflict resolution, interpersonal problem solving and social skills. Using the Achenbach Child Behavior Checklist and Teacher Report Form, the School Social Behavior Scale and the Parent Rating Scale all students were rated two weeks following the Second Step lessons and 6 months after the Second Step treatment. There were decreases in rates of negative behavior and increases in prosocial behavior in the treatment group at both times. Rates of negative behavior increased in the control group during the same time periods.

Harrison, Sparks, McMillan and Renner (1997) reviewed a peer mediation program in Texas that included 140 schools in 24 districts. Approximately 500 teachers and 2000 students received training. Rice University's evaluation found that 88% of the trained students were "confident in resolving conflicts between classmates" (Harrison et al, 1994, p. 14). Although discipline remained a top concern, time spent on discipline and aggression problems are often reduced by nearly 50% by conflict resolution trainees, (Spears, 1998).

Jone's (1997) report on the effectiveness of various peer mediation and conflict resolution programs investigated the programs of 430 peer mediators, 1400 conflict resolution trainees, 225 teachers and school personnel and over 5000 control students in 27 schools. Included in the measures were frequency of conflict data, conflict resolution style data and perceptions about school climate.

Whole school conflict resolution programs were found most effective for improving school climate. Peer mediation and cadre approaches were found effective for improving students' conflict resolution skills and decreasing violent outcomes and aggressive behavior in school.

Nakkula and Nikitopoulos (1998) led the Harvard team who developed an evaluation of the PYN Program for Young Negotiators. The Harvard Evaluation Team assessed their program training, teacher effectiveness, and student outcomes and curriculum. The PYN participants assessed were significantly less likely to use physical force to settle a conflict and less likely to be reported for behavior and discipline problems than control students. The evaluation found significant improvements in conflict management style in all participating schools.

The National Institute for Dispute Resolution evaluation team (1998a) studied the effects of conflict resolution training on adolescents who were charged with gun possession found that the trainees were significantly less likely to become recidivists than those who had little or no training. In a related investigation, the report by Drug Strategies (1998) found that the most effective programs for reducing drug violations were life skills programs which focused on anger management, development of empathy, perspective taking and social problem solving or conflict resolution skills.

Black and Krishhakumar's (1998) from the Dept. of Pediatrics at the University of Maryland, investigation of programs and interventions that protect the mental and physical health of urban youth. Their study cited four violence prevention and conflict resolution programs as examples of programs that

increase resilience in the urban setting.

Metis Associates (1990) began their evaluation of the Resolving Conflict Creatively Program (RCCP) in 1988 at the request of community School Districts in the New York area. The RCCP program, starting in 1985, is now reaching 70,000 students in 180 schools a year. Most teachers try to introduce or review one peace lesson each week and create a climate with zero tolerance for physical aggression or psychological or racial bias. The program teaches non-violent alternatives to conflict, including conflict resolution training and diversity appreciation/intergroup relations training. Components of training include a 20-hour training course for teachers, a 10-unit classroom curriculum in conflict resolution, along with staff support and other support services. Two hundred teachers were given the Metis Survey; 65% responded. Administrators were also given a brief questionnaire. Questionnaires assessing knowledge of conflict resolution concepts and "conflict resolution behaviors" (p.2) were given to 176 of the RCCP trained students and 219 matched control group students. As well, 150 classroom teachers and 11 other school staff members (special advisors to student mediators) responded to questionnaires about the peer mediation arm of the RCCP program. 143 mediators also completed questionnaires and surveys. Teachers found the conflict resolution curriculum units most helpful and frequently used as follows:

Communication unit (80.6%)

Peace and Conflict Studies (79.8%)

Cooperation unit (75.8%)

Seventy three percent of the respondents used no conflict resolution prior

to the introduction of the RCCP curriculum. Seventy two percent of responding teachers have observed less physical violence since training. Sixty six percent of the teachers have observed less name calling and fewer verbal attacks and 71.5 percent of the teachers have observed students' increased skills in considering other perspectives. All of these were confirmed by the subjects' self-reports. The 20-item conflict resolution skill and behavior student test showed a statistically significant mean difference between control and treatment group means. The largest differences were on the conflict resolution skill subtest.

Eighty four percent of teachers noted positive changes in classroom climate. In open-ended questions many teachers noted their increased understanding, sensitivity and communication with students of different ethnic or cultural backgrounds. Roderick's (1998) evaluation of the RCCP curriculum over a two year period found that although most student conflict resolution behavior did not improve in the schools studied, the classrooms that had a high level of conflict resolution implementation and integration had significant positive changes. Roderick's (1998) study pointed out that program implementation levels need further study. In classrooms where the teacher had significant contact with training staff but little use of the program and little or no conflict resolution integration, students' conflict attitudes and behaviors worsened.

Conflict Resolution and School Climate

One of the most important effects of a successful conflict resolution program is a positive change in school or classroom climate. A school climate characterized by a sense of moral, social and psychological safety is an essential

prerequisite for students to develop school attachment and engage in higher order thinking. (Sylwester,1995).

Physical safety in school is an issue for all students. Everyday 100,000 students bring guns to school, 160,000 skip classes because of their fear for their safety, 40 students are hurt or killed and over 6,000 teachers are threatened (Bloom, 1997). In a recent survey 25% of suburban high school students "endorsed shooting someone" if they had "stolen something from you" and the majority of 1700 middle school students considered rape an acceptable treatment for girls under certain conditions (Bloom, 1997, p.198).

Educators and psychologists have long felt that a sense of safety is an essential prerequisite for any educational setting. Years before magnetic resonance brain imaging, Abraham Maslow "grasped the dilemma...that human motivation consists of a hierarchy" (Restak, 1994, p.108). Our biological needs, including physical safety, should be met before we ascend to self-esteem and creative and critical thinking. Our "higher needs mediated by the frontal lobes are fulfilled only after the satisfaction of more basic biological needs" (Restak, 1994, p.108). The early work of Papez and MacLean (Restak, 1994) identified the lower emotional brain responsible for the "stream of feeling" integrating with the "stream of thought" (Restak, 1994, p.141).

It may be impossible for many students to engage in higher level reasoning in a high threat environment. The recent research of Joseph LeDoux at New York University has shown that sensor input ascends to the cortex for conscious processing but also may ascend directly to the amygdala, by passing any cortical connection via the medial geniculate and the thalamoamygdalar

pathway (Goleman, 1994, p.4). These studies suggest that a fear response in the amygdala has a small advantage in the brain, probably no more than a twenty fifth of a second, during which the emotional brain can override the cerebral cortex response. The amygdala plays an important role in the storage of memory as well. The "structural relationship between the amygdala and cortex offer a crucial insight...the connection from the cortex to amygdala are only inhibitory. While the amygdala can hijack the brain, the cortex can only put the brakes on" (Goleman, 1994, p. 4).

While the cerebral cortex may override a reaction, decide how to react and how long to react in some cases, "We cannot decide when to have an emotional reaction (Goleman, 1994, p.4). In a case of extreme fear of threat, the hijacked brain may take quite a while to recover. LeDoux (1994) reminds us that "consciousness is a prerequisite to subjective emotional states. Thus, emotions or feelings are conscious products of unconscious processes" (p.57). Although emotional and declarative memories seem to be joined "seamlessly in our conscious experience" (LeDoux, 1994, p.57) they are in fact products of separate functions. The amygdala and the unconscious emotions exert "a powerful influence on declarative memory and other thought processes" (LeDoux, 1994, p.57). Because we can not chose to turn off the amygdala, we must instead chose to concern ourselves with the classroom climate and anger management or self control. Because "a child's ability to learn academic material is profoundly affected by emotional states" (Elias, Zins, Weissberg, Frey, Greenburg, Hayes, Kessler, Schwab-stone and Shriver, 1997, p.49) and emotional states are affected by classroom climate, a sense of safety is our first goal in the conflict positive

classroom. Joseph LeDoux (1996) suggests "that emotion and cognition are best thought of as separate but interacting mental functions mediated by separate but interacting brain systems" (p.69). Although the emotional brain responds automatically, our "cognition gives us choices" (LeDoux, 1996, p.69) once we begin to understand our emotional reactions. In order to effectively integrate better brain systems we need to learn to understand how to handle our emotional responses in a non-threatening environment.

Chronic stress and "high cortical levels can lead to the destruction of neurons in the hippo campus associated with learning and memory" (Sylvester, 1995, p.38). Temporary, short-term elevation of cortical in the hippo campus can "lead to an inability to distinguish between important and unimportant elements of a memorable event" (Sylvester, 1995, p.38). On the other hand "exercise and positive social contacts" (Sylvester, 1995, p.38) elevate the brain chemicals that "can increase the possibility that students will learn how to solve problems successfully in potentially stressful situations" (Sylvester, 1995, p.39). Although "we don't learn emotions" (Sylvester, 1995, p.75) we can learn to recognize and work constructively with them.

LeDoux and Hirst (1989) suggest that neuroscientists must seek a "true collaboration" (p.358) with those who work with children in other fields to develop "a unified psychobiological theory of emotion" (p.355). Although we "feel before we know" (LeDoux and Hirst, 1987, p.363) what we know can affect what we feel and what we learn can affect how we react.

LeDoux's work bears directly on American classrooms. Although a state of mild stress may "facilitate recall" (Restak, 1984, p.175) students in a

physically or psychologically threatening environment will become "too anxious to take in new information" (Restak, 1984, p.1984) and generally find that their "performance deteriorates...increasing disorganization" (Restak, 1984, p.175). Anxiety may cause pupils to dilate making simple "reading more difficult" (Restak, 1984, p.175). Beyth-Marom, Fischhoff, Jacobs and Furby, (1989), find that "greater anxiety leads to shorter and less effective decision processes" (p.10). Our "affect draws our attention to something, determines what information reaches our consciousness" (Bloom, 1997, p.41) in the classroom and in the rest of our life experiences. The "cognitive rigidity experienced during anger arousal" (Stoshy, 1995, p.59) causes a polarizing cognitive effect, making any critical thinking or creative consideration of multiple perspectives highly unlikely, if not impossible.

Inhibition and inability to express negative emotions or resolve negative conflicts is associated with "potentially deleterious changes in the ways we think. In holding back significant thoughts and feelings...we typically do not think about an event in a broad and integrative way" (Pennebaker, 1997, p.9). If a student does not talk about a negative event, he usually will not translate the event into language" (Pennebaker, 1997, p.9) which will prevent him from "understanding and assimilating the events (Pennebaker, 1997, p.9).

Izard (1991) and her other colleagues have found that positive emotions facilitate "cognitive processes such as thinking remembering, categorization, and creative problem-solving" (p.167). In fact, subjects who interact with a happy, positive evaluator (vs. a negative, critical evaluator) to establish a positive mood and climate, show higher level thinking on intelligence tests that follow (Izard,

1991).

The unconscious phenomenon that causes the brain to shift from higher-level thinking to lower-level thinking has been termed "downshifting" (Caine and Caine, 1997, p.13). This cognitive switch-"downshifting" is a psychophysiological response to threat associated with fatigue or perceived helplessness or both" (Caine and Caine, 1997, p. 18). The "downshifted learners then bypass much of their capacity for higher-order functioning and creative thought" (Caine & Caine, 1997, p.18). To prevent downshifting students need a safe, low threat, high challenge environment that creates "relaxed alertness" (Caine & Caine, 1997, p. 153). Safety, coherence, respect, orderliness and a sense of community are aspects of the high challenge, low threat environment. Caine and Caine (1997) have also recommended that conflict resolution programs be established in all schools to maintain a "healthy discussion" (p.250) of different perspectives and a healthy environment. Perhaps the most significant development beyond establishing safety, is the recognition of the nature of the students' emotional and social brain" (Caine & Caine, 1997, p. 104). Vygotsky introduced many educators to the concept of the social construction of knowledge (Caine and Caine, 1997). As Caine and Caine (1997) review the research on the brain's psychophysiology and cognition, they suggest that the students' social brain has been "sadly neglected" (p.90).

Cooperative Learning in a Conflict Positive Environment

Studies of successful schools with high academic achievement records in high-risk urban environments consistently report that school culture or climate is the essential ingredient for highly successful low socio-economic status students. Measures of cooperative classroom climate show positive change in the studies reviewed (Johnson and Johnson, 1996). In one three year study of a comprehensive conflict resolution program, teachers noted increased cooperative learning as the most significant classroom change after conflict resolution programs implementation (Heydenberk and Heydenberk, 1997). Although the evaluators expected the teachers to report "less time in conflict" or another conflict related issues, the program teachers found that the improved communication skills, integrative thinking and high levels of school attachment significantly affected the amount of time spent in genuine cooperative learning tasks. (Heydenberk , 1997)

A meta analysis review of 122 studies, conducted by Johnson, Maruyama, R. Johnson, Nelson and Skon (1981) found 236 effects. These effects indicate that "cooperation promotes higher achievement than does competition" (Johnson et al, 1981, p.51) with an effect size of .78. The average student in the "cooperation condition performed .75 sd above the average person in the competitive condition" (Johnson et al, 19, p.57). Cooperation also "promotes higher achievement than do individualistic environment....effect size of .78" (Johnson et

al, 1981, p.51). Cooperation is superior to individualistic efforts in promoting productivity, as well.

Gabbert, Johnson and Johnson's (1986) study of cooperative learning versus individualistic learning effects on achievement in a randomized, stratified sample of elementary students found that achievement gains "transferred to individual testing situations for three higher-level reasoning tasks" (p.265). Interestingly, there were no group differences on lower level tasks. Johnson and Johnson (1992) point out that although hundreds of studies have shown the effectiveness of cooperative learning structures, "simple placing students in groups and telling them to work together does not in and of itself promote higher achievement and higher level reasoning" (p.121). Groups must possess the "essential elements of positive interdependence,...face to face promotive interaction....., individual accountability and interpersonal and small group skills" (Johnson & Johnson, 1992, p. 121).

Many studies show improved interpersonal skills as a result of conflict resolution training (Johnson and Johnson, 1996). This increase in interpersonal skills has helped some teachers studied increase their use of cooperative learning strategies (Heydenberk & Heydenberk, 1997) in a conflict positive environment.

Stevahn, Johnson, Johnson and Real (1996) studied the effects of cooperative (vs. individualistic) context on the success of conflict resolution training and content comprehension. Two independent variables were considered: the integration of conflict resolution training into a content area unit, and cooperative versus individual learning conditions. Students were randomly assigned to either an integrated cooperative group conflict resolution-content area

training, the cooperative condition content unit without the conflict resolution training, an individualistically structured content unit with conflict resolution or the identical content unit without conflict resolution.

The students in the cooperative conflict resolution group scored higher on conflict resolution and academic achievement measures. Although all students in the cooperative conditions "used more constructive strategies" (Stevahn et al, 1996, p. 812), there was still a significant interaction effect indicating that the difference between conflict resolution trained and untrained students was significant in the cooperative condition" (Stevahn et al, 1996, p.312).

Fishbein (1996) contends that prejudice and discrimination have not been sufficiently reduced through mainstreaming or desegregation. He tells us that cooperative learning in classroom settings may be our best hope. Fishbein agrees with Johnson and Johnson's assessment that effective cooperation must include positive goal interdependence and complementary roles. Fishbein (1996) examined 20 studies that focused on prejudice education in cooperative academic settings. Three of the studies measured various multiple outgroup prejudices. Fourteen studies focused on racial and ethnic prejudice, three investigated gender bias, and the last six looked at prejudice towards disabled children. The sample sizes ranged from 11 to 558 with an average of 134 subjects ranging in age from two to 12 years old.

Fourteen of the studies included in Fishbein's (1996) review had children working in cooperative context as a single experimental condition. The control condition in 18 of the studies involved children working individually" (Fishbein, 1996, p.235). Six of the remaining studies included two experimental conditions-

-one cooperative and one competitive. The three studies of gender bias indicated that cooperative interaction "does reduce discrimination toward opposite sex classmates and prejudice toward unknown members of the opposite sex" (Fishbein, 1996, p. 235). There were 17 outcomes from the 14 studies on racial and ethnic discrimination. The prejudice study outcomes were not as clear "although there are some limited data showing that attitudes toward outgroup classmates seem to improve following cooperative interaction" (Fishbein, 1996, p.240).

All of these studies considered together provide strong evidence that "cross-racial discrimination decreases as a result of cooperative interaction" (Fishbein, 1996, p.240) and the changes may be long-lasting. Furthermore, the effects may go past increased tolerance of racism and ability differences to actual friendship "playmate" (Fishbein, 1996, p.241) choices. The results hold for children of all ages. The increased cooperation in the conflict positive classroom may have effects more far reaching than simply lowering incidents of physical aggression and destructive conflict in the classroom.

Johnson and Johnson's (1979) review of the positive cognitive and academic effects of cooperative conflict found that context of the controversy or conflict resolution was the most important factor in determining whether the resulting resolution would be constructive or destructive. In order for the outcome to be "constructive, information must be accurately communicated--within a cooperative context" (Johnson & Johnson, 1979, p.58). In a competitive context "communication tends to be nonexistent or misleading" (Johnson & Johnson, 1979, p. 58). The second requirement was that the resolutions occur in a

"supportive climate in which people feel safe enough to challenge each other's ideas" (Johnson & Johnson, 1979, p. 58). Constructive problem-solving outcomes were those that dealt with understanding the feeling involved in the conflict or controversy as well as the ideas. The quality of the resolution was also effected by how the problem was defined (e.g. a joint concern) and how well students could identify similarities and differences between opinions or positions.

Gabbert, D. Johnson and R. Johnson's (1986) study of cooperative learning environments found that students in a cooperative context achieved higher scores when tested individually on three higher level reasoning tasks. D. Johnson, Skon and R. Johnson (1980) studied 45 first grade students randomly assigned to cooperative, competitive and individualistic conditions. Students in the D. Johnson, Skon and R. Johnson (1980) study used higher-quality reasoning strategies when tested individually on a battery of critical thinking tests. Furthermore, the higher ability students consistently out performed the higher ability students in the competitive or individualistic conditions. The cooperative condition students out performed a stratified random sample of their peers on problem-solving tasks and they consistently used "superior [thinking] strategies for deriving their answers" (D. Johnson, Skon, R. Johnson, 1980, p. 91). Some concerned critics of cooperative learning environments have explained gains by explaining that low ability students benefit from the brighter student tutoring in the cooperative context. This study found that all ability groups benefited from the cooperative discussion of reasoning and problem solving. D. Johnson, Maruyama, R. Johnson, Nelson and Skon (1981) reviewed 122 studies that confirmed their findings of improved academic performance and critical thinking

in a cooperative environment.

The effects of a cooperative climate as reviewed by Kohn (1986) include increased individual and group productivity, increased individual learning and comprehension, increased social skills and dispositions regarding the learning tasks. However, "despite this evidence....we continue trying to succeed at the price of other peoples failure" (Kohn, 1986, p.183) As Kohn (1986) points out, even in the most competitive business environments are those characterized by cooperation among workers within a company in order to achieve success.

Although we tend to "attend instead to the far more visible instances of struggle" (Kohn, 1986, p.18), the truth is that the vast majority of human interaction, in our society as well as in other societies, is not competitive, but cooperative interaction" (Kohn, 1986, p.18) Kohn (1986) agrees with Ashley Montagu and David and Rodger Johnson that "without the cooperation of its members society can not survive"(p.18) and furthermore, "the society of man has survived because the cooperativeness of its members made survival possible" (Kohn, 1986, p.18). Cooperation is, according to conflict theorist Morton Deutsch, "inherent in the very idea of society" (Kohn, 1986, p.19).

Children are naturally anxious to play together, to communicate and to exhibit the "so-called prosocial behaviors--cooperation, helping, sharing, comforting and so on" which "occur in almost every child" (Kohn, 1986, p. 19). Although the research in this area is "practically nonexistent" (Kohn, 1986, p.19). It is the child who is the exception, the bully, the shy, the troubled child who, understandably, gets our attention and the vast majority of our research efforts. Although we may learn how to exhibit cultural conventions, our manners, and our

prosocial behaviors, the "inclination to help...exists literally from the beginning of life" (Kohn, 1986, p. 19). Even Charles Darwin reminded us the struggle for existence was largely successful because of our cooperative skills. (Kohn, 1986, p. 21).

Conflict Positive School Environment

Related to cooperative climate and positive affect, researchers asked elementary school and older children to think of either happy or sad experiences before learning new words. On free recall and cued recall tests researchers found that "happiness significantly increased learning and memory" (Izard, 1991, p.168).

Slywester, (1995) in his recent work in brain research and education, stated that it is "impossible to separate emotion from the important activities of life. Don't even try" (p.75). Slywester (1995) tells us that after reviewing the research on emotions and neurobiology "several general themes are emerging" (p.75) that are relevant for educators. The first theme is that ignoring emotions or relying on "imposed control over students or staff" (p.75) doesn't work. "We don't learn emotions" (Slywester, 1995, p.75), but we must learn to recognize, accept and work constructively with them. Sylwester (1995) suggests programs that help children "develop forms of self-control" (p.76) and allow students and staff there to deal with emotions so "reason can take over" (p.76) again. The second theme is that "schools should focus more on metacognitive activities that encourage students to talk about their emotions, listen to the feelings of

classmates and to think about the motivations of people who enter into their curricular world" (Slywester, 1995, p.76). The third emerging trend suggestion is using activities that promote social interaction like cooperative learning. These activities increase students' performance, depth of comprehension and may contribute to a positive classroom climate. Next, Slywester (1995) tells us to provide emotional context for increased memory and meaning and avoid emotional stress in the learning environment.

Nummela and Rosengren's (1986) review of brain research asserts that students' brains will continue "to engage in personally meaningful activity not necessarily related to the lesson or what the teacher is teaching" (p.50) if the student finds it devoid of all emotion or meaning. If students are emotionally engaged both sides of the brain will be involved in the learning activity and the education process, increasing performance. A relaxed, positive, environment with some positive social interaction will "stimulate more efficient functioning for the entire cortex and increase learning and reasoning potential" (Nummela and Rosengren, 1986, p.50). A tense, fearful or conflict ridden environment or extreme boredom in an environment without emotion and positive social interaction causes "downshifting" (Nummela and Rosengren, 1986, p.51). When downshifted the old brain's programmed survival behaviors "allow little room for reflection, insight, foresight and other more complex learning associated with the neo-cortex" (Nummela and Rosengren, p.51).

Slywester (1995) points to research studies of human brain development, but he also considers what "researchers have consistently found" (p.128) with rats in the field of experimental psychology. Researchers find "significant general

cortical improvements" (Slywester, 1995, p.129) in an enriched social environment within a few days of being moved out of an isolated environment. Slywester (1995) tells us that years of research indicate that significant cortical growth occurs" only in changing, stimulating, social environments" (p.132).

Other studies have shown that positive peer interactions and an integrative thinking environment are important but not the only factors affecting student performance. "Teacher empathy frequently appears to be substantially associated with student achievement gains, as well as a variety of positive, non-achievement outcome criteria" according to Goldstein and Michaels (1985, p.155). In some studies, students taught by teachers who were characterized by caring and accurate empathy gained 2.5 years in reading achievement in one 5-month study (Goldstein and Michaels, 1985). Other studies have found similar significant, positive relationships between caring, empathetic teachers and students' math and reading achievement scores.

Wentzel (1997) studied the relationship between a students' motivation to achieve, academic performance, the student's relationship with the teacher, and a positive social climate. A sample of 248 students was followed from sixth through eighth grade. Perceived caring from teachers was defined as teachers who where demonstrating democratic expectations for students while considering individual differences among them, interacting with constructive feedback to student efforts and a "caring attitude" (Wentzel, 1997, p.411). When asked to characterize a caring teacher the largest percentage of responses pertained to positive expectation and caring democratic interactions. Interestingly, students did not mention rule enforcement or rule setting characteristics as important

aspects of caring or uncaring teacher behavior. Nurture, respect for students' decision making abilities and respect for individual differences were important teacher characteristics.

The "perceived caring from teachers predicted motivational outcomes even when....levels of psychological distress.....as well as previous....motivation performance were taken into account" (Wentzel, 1997, p.411). The relationship between caring and students' performance "were robust" (Wentzel, 1993, p.415). Even with controlling for individual ability differences, Wentzel (1997) feels that perceptions of caring from teachers should be considered as a significant motivating factor for students relative to both academic and social performance. (Wentzel, 1997) suggests that "feelings of belongingness and of being cared for can foster the adoption and internalization of goals and values of caregivers" (p.411).

As the decades of work of Hawkins and Catalano (1993) has shown that, although there exists a large body of research about the relationship between academic failure and negative social, moral and behavior outcomes, "it appears that the experience of failure--not ability--increases the risk of problem behaviors." (p.7). It is the students' painful detachment from the school community, not IQ, that predicts the problems in many cases (Hawkins and Catalano, 1993). As Lewis, Schaps and Watson (1996) review a program that includes constructive conflict resolution, non violent problem solving skills--and community building, they conclude that "students work harder, achieve more, and attribute more importance to school work in classes in which they feel liked, accepted, and respected by the teacher and fellow students" (p.141).

Roeser, Midley and Urdan (1996) studied the mediating role of attachment or belonging and academic achievement. Not surprisingly, students' perceptions of the school environment and students' relationship with teachers shape student's school-related beliefs, sense of school belonging and academic achievement. An environment where students feel self-conscious or threatened may cause alienation and impaired ability to concentrate, a fear of taking academic risks and other performance threatening behaviors (Roeser et al. 1996, p.416). This study of 298 middle school students examined task goal structures, self-efficacy, personal achievement and school belonging. Although "48% of the variance in academic self-efficacy was explained with prior GPA, personal task goals and feelings of belonging emerged as the strongest predictors" (Roeser et al, 1996, p.416). School task structure "and the quality of teacher-student relationships were the strongest predictors of personal task goals and feelings of school belonging respectively" (Roesner et al, 1996, p.416). In summary, Roesner, Midgley and Urban (1996) suggest that school environments characterized by caring and respect for individual efforts and differences "are related to a more adaptive pattern of cognition, affect, and behavior" (p.417).

Other researchers have identified similar aspects of the classroom climate that affect cognition (Davidson and Worsham, 1992). Studies have shown that a "negative affective tone will inhibit learning and a positive affective tone will enhance it" (Davidson and Worsham, 1992, p. 10). In a conflict positive, cooperative environment students develop metacognitive skills. Students develop criteria to evaluate their own and others' performance (Costa and O'Leary, 1992, p.53). The co-cognition developed by discussing, explaining and evaluating ideas

as a group enhances metacognition when a student works alone (Davidson & Worsham, 1992). Comprehensive conflict resolution programs have been shown to transform school climate in a way that makes learning possible (Jones, 1998).

Conflict Resolution and School Attachment

Positive changes in students' dispositions and in their academic performance may be fueled by increased school attachment, among other factors discussed. Skills are further strengthened when the environment provides opportunities for social co-cognition and the increased metacognition engendered in the cooperative classroom (Davidson and Worsham, 1992). The relationship between constructive conflict resolution emotional intelligence, social skills and school attachment is significant, if not simple.

The importance of community or school attachment was recognized by the French sociologist Emile Durkheim (Empey and Stafford, 1991) who stated, "the more weakened the groups to which [the individual] belongs, [and] the less he depends on them, the more he consequently depends on himself and recognizes no other rules of conduct than what are found on his private interests" (p.260). In short, it appears that the weaker the attachment to school, the greater the delinquent behavior" (Empey & Stafford, 1991, p.283) and the lower the level of the students' self-esteem and "respect for their teachers" (p. 283) and the rest of the school community.

Raphael Ezekiel (1997), a senior research scientist at the Harvard School of Public Health, spent four years interviewing Nazi and Neo-Nazi youth. He

found that what characterized Nazi youth most significantly was not an ideological tie to the white supremacist. Indeed, most of them did not have a meaningful understanding of their own alleged cause or any other. They were characterized by a "deep level of fear" and in "addition to fear, isolation seemed paramount" (Ezekiel, 1997, p.111). In years of interviewing Ezekiel, (1997) never "heard one of them talk about an adult, other than his mother, who played an important role in his life. No one ever talked about a teacher who was important, a community agency worker, an uncle, an aunt or a sibling. These kids were in desperate need of a family.....they heard the constant refrain that white power is your family" (p11). Almost all members were school drop-outs by ninth or 10th grade. Furthermore, none of them were particularly attached to any Nazi ideal. "They could have readily been recruited into Earth First" (Ezekiel, 1997, p12) in their desperate search for a sense of belonging.

Perhaps the most prolific of those who research resilience, David Hawkins (1994) summarizes it well: "Not only does better communication address the risk factor of antisocial behavior, but one also presumes that people who can communicate well can more easily form bonds with other than people who can't." (Hawkins, Catalano, Herman, Ransdell, Roberts, Roden, Startkman, 1994, p.15) The authors recommend first considering one of ten conflict resolution curricula they review. The school-wide adoption of conflict resolution programs may begin to increase attachment and resilience in our students.

Deborah Prothow Stith's (1990) work has convinced her that lack of neighborhood and community school attachment creates gang attachments and gang rituals: "Pro-social and anti-social, they satisfy the adolescent need to

belong to a group separate from one's family. Prosocial or antisocial, they provide young people with goals and objectives, a world view, and a place where they are valued....The more adrift a young person feels, the more powerful the attachment of the peer group" (p.97). In short, a review of decades of research indicates that "bonding or attachment to deviant peers was directly related to delinquency and later drug use for both males and females and across multiple measures of delinquency and drug use. Moreover, weak conventional bonding (i.e.--poor connections with family and school) was a factor that led to increases in deviant bonding" (Eron, Gentry & Schlegel, 1994, p.349). Thus, the early pathway to delinquency and a lack of prosocial attachment was caused by "a breakdown in connections to home, school and family" (Eron et al, 1994, p.349). The APA task force "suggests that interventions would be advised to focus on these connections" (Eron, et. al, 1994, p.349) to prevent delinquency and foster healthy prosocial dispositions.

Among the researchers who have focused on children's resilience in the last few decades are Farrington, Rutter and Werner. Farrington (1990) followed 411 London males in his Cambridge study in Delinquent Development and reviews dozens of studies similar to his own in Canada and the United States. The best independent predictors of antisocial behavior were lack of leisure time with parents and "authoritarian child-rearing practices" (p. 298) indicating low family attachment. The childrens' antisocial dispositions and "crime rates appear to be reduced by the presence of an affectionate parent" (Farrington, 1996, p.312) or other significant adult. Farrington and his colleagues state, "a single good relationship may serve to insulate a child against potentially damaging childhood

environments" (Farrington, 1996, p.312). School environments characterized by "good classroom management, high expectations...coordination and cooperation between faculty and administration...well publicized rules and moderate size" (Farrington, 1990, p. 309) increase school attachment and decreased delinquency. Students "who dislike school and teachers, who do not get involved" (Farrington, 1990, p.309) are more likely to engage in dangerous anti-social behavior.

Werner's (1989) longitudinal study followed a 1955 birth cohort of 698 in "high risk" (p.72) children. The resilient adults who were the resilient subsection of Werner's high-risk group were characterized first by a sociable disposition as an internal locus of control. They were at least of average intelligence and "competence in communication skills" (Werner, 1989, p.80). The second main "protective factor" (Werner, 1989, p.80) was affectional ties with the family that provide emotional support in times of stress" (Werner, 1989, p.80) and the third characteristic was "external support systems" (p.80) representing some form of community attachment (e.g.: school, work and/or church). In Rutter's (1994) own longitudinal studies and an extensive review of other related research including a meta-analysis of social problem-solving studies he concludes that social skills and attachment are protective factors: "A capacity for thoughtful reflection and appropriate interpersonal behavior in a context of positive relationships with competent individuals within a social structure filled with possibilities for valued roles and involvement in a healthy antidote to risk" (Rutter, 1994, p.290). In short, "social competencies" and "a positive relationship" (Rutter, 1994, p.290) or attachment are the most significant protection a child may have.

On the other hand, unresolved "conflict between family members appears to be more important in predicting delinquency than family structure" (Lehman, Hawkins and Catalano, 1994, p.90) as is "lack of commitment to school" and "low neighborhood attachment" (p.96). Although academic failure has been associated with delinquency "it is the experience of failure that appears to escalate risk, rather than abilities per se" (Hawkins, 1995, p.13). The damaged bond or attachment to school is again the best predictor of antisocial or violent outcomes (Hawkins, 1995, p.13).

Resnick and colleagues (1997) recently reported that "the main threats to an adolescents' health are the risk behaviors they choose" (p.823). In their study and interviews of 12,118 adolescents the parent/family connectedness and perceived school connectedness "or attachment" were the most significant protective force against "every health risk behavior measure except history of pregnancy" (Resnick, et al, 1997, p.823), Cawelti (1995) reviews a body of research on social problem solving skills showing that "students who develop personal competence are more likely to make a commitment to positive health behaviors. In a range of settings with heterogeneous target populations" (p.62). He summarized by suggesting that students need to be made "aware of alternative modes of behavior, they need to understand that they do, in fact, control decisions" (Catwolti, 1995, p.62) that lead to healthy and happier outcomes. Hawkins and Catalano (1993) summarize decades of research on resilience by stating "perhaps the most significant issue affecting community attachment is whether residents feel they can make a difference in their own lives" (p.6). Low neighborhood attachment and "persistent, serious conflict," (Hawkins & Catalano,

1993, p.7) in the family and the neighborhood present remain significant risk for children.

Masten and Coatsworth's (1998) review of the research on the development of resilience and competence considered "studies of naturally occurring resilience among children at-risk because of disadvantages or trauma" (p.205) and studies of "efforts to deliberately alter the course of competence through....preventive interventions" (p.205) as well as the "results of studies of competence in the domains of peer relations, conduct, school work and activities" (p.205).

The "converging evidence" (Masten & Coatsworth, 1998, p.205) the authors found "suggest that the same powerful adaptive systems protect children's' development in both favorable and unfavorable environments" (Masten and Coatsworth 1998, p.205). Those powerful mechanisms are attachment relationships and self-regulation. Attachment relationships are "universal human phenomena in development" (Masten and Coatsworth, 1998, p.207).

Longitudinal studies of resilient children who have endured multiple risk environments confirm the significance of attainment "relationships for successful adaptation" (Masten and Coatsworth, 1998, p. 208). Attachment opportunities lay the foundation for children to learn "a set of skills known as self-regulation" (Masten and Coatsworth, 1998, p.208). Affect and attention regulation are "linked with the development of competence in multiple domains from an early age" (Masten and Coatsworth, 1998, p. 208).

There is a relationship between lack of affect regulation or emotional self-regulation and poor academic performance. The "preponderance of the data"

(Masten and Coatsworth, 1998, p. 210) suggests that the antisocial affect causes the academic failures in most cases, not vice versa. At the elementary school level, children who are able to experience some success in school are more likely to form prosocial attachments to peers and staff in the school community (Catalano and Hawkins, 1996).

Over 30 years of research on resilience has studied children in a range of environments inclusive of homes with family mental illness, family violence, poverty, natural disasters and war, among other risk factors. Results of all of the research have been remarkably consistent in pointing to the importance of prosocial attachments as a source of resilience. Masten and Coatsworth (1998) state that a competence develops in the midst of adversity when despite the situation at hand, fundamental systems that generally foster competence...are operating to protect the child or counteract the threats" (p.212). Masten and Coatsworth (1998) consider "attachment relationships...fundamental to human adaptation" (p.213). The research also links "problem solving skills to better outcomes among children at risk" (Masten and Coatsworth, 1998, p. 213).

Because we cannot control all of the risks in a child's environment these researchers suggest that we strengthen the "adaptive systems that appear to be strongly tied to competence, such as attachment, self-efficacy and self-regulation" (Masten and Coatsworth, 1998, p. 214) for our children. Programs "enhancing cognitive and social competence in children...have long term cumulative protective effects" (Masten and Coatsworth, 1998, p.215) in the resilience research literature. The earlier parent-child attachment provides a crucial scaffolding for any child, however "competence is often linked to a surrogate

caregiving figure" (Masten and Coatsworth, 1998, p.215)--a teacher, a friend or a mentor, as well as a parent. Prosocial peer attachments can serve to support and protect a child as well. Antisocial peer interactions can destroy attachments, causing further alienation from prosocial support systems for the at risk child.

Katz (1997) suggests, as do most researchers, that the first protective attachment is ideally from a child's family. However, "sometimes protection originates from within the community. A school that offers smaller class sizes, that can address each child's unique learning needs and highlight each child's special strengths, talents and interests is protective....can be places of safety as well as places...where positive identities are formed. Close and enduring relationships are also protective." (Katz, 1997, p.26) The children Katz (1997) studies "who have overcome childhood adversities often identify a special person in their lives--a parent, teacher, coach, counselor....who was always there when needed" (p.26). The other sources of protection can "come from within" (Katz, 1997, p.26) as in children who are skilled socially or academically. Katz (1997) states that parents and children may "have perhaps no greater resource than the neighborhood school for protecting, nourishing and stimulating children" (p.96) and giving children social skills and academic skills. The first characteristic of "urban sanctuaries" (Katz, 1997, p.102) is safety.

The APA Commission on Violence and Youth (Eron, Gentry and Schlegel, 1994) also suggest that school provides a unique opportunity to "create positive connections across group lines" (p.307). Among the task force recommendations (Eron et. al. 1994) are "the development of cognitive and interpersonal skills for conflict resolution" (p.89) rather than the "heavy and

inflexible use of school rules" (Eron et al, 1994, p.41) that lead to increased student alienation and aggression. Conflict resolution strategies to increase school attachment have also been recommended by Hawkins and Lishner (1987), Hawkins and Catalano (1993), Deborah Prothrow-Stith (1991) and others.

The Institute for Mental Health Initiatives IMHI authors Baruch and Stutman, (1993) suggests that the "facilitative environment" (p.3) for fostering prosocial resilience includes "responsive caring" (p.3) in a safe environment, and encouragement of a students' personal strengths which "includes such qualities as control of impulse and self-esteem" (p.3), and cognitive and social problem solving. The IMHI (Baruch & Stutman, 1993) research has focused on the "protective mechanisms which have been shown to be important in fostering resilience" (p.3) including a sense of competence, a sense of virtue and a sense of hope. They recommend building skills that used involved in the "mastery of stress" (Baruch & Stutman, 1993, p.9) or conflict such as Michenbaum's "stress inoculation training" to build "psychological antibodies" (p.9). Michenbaum's program includes stress recognition and emotional literacy, relaxation training and various conflict resolution strategies. The Mental Health Institute also recommends Shure and Spivack's Cognitive Problem-Solving (ICPS) training which social skills and skills to resolve conflict constructively including "emotional awareness" (Baruch & Stutman, 1993, p.110) information gathering and brainstorming solutions. Research has shown the ICPS "has dramatic significance in social adjustment" (Baruch & Stutman, p.993, p.11).

O'Donnell, Hawkins, Catalano, Abbott and Day (1995) suggest ICPS conflict resolution increase "problem-solving ability as a means of improving

social adjustment" (p.91). They recommendation is that ICPS be used to prevent school failure. Hawkins and Fraser (1983) found that an approach that can "move away from counseling and...intervention" (p.343) and instead create "neighborhood problem solving structures [placing people in] mediation and planning roles" (p.343) will create an environment where children build attachments to adults more readily, thereby fostering resilience.

Elias, Zins, Weissberg, Frey, Greenberg, Haynes, Kessler, Schwab-Stone and Shriver (1997) state that "an emotional attachment to teachers, peers and school is a vital link to academic success" (p.45) (Elias et al, 1997, p. 45). They suggest that emotional literacy, cooperative learning, active "listening to others, taking others' points of view, negotiating and, using the generic steps of problem solving" (Elias, 1997, p.55) can build prosocial attachment, helping students "reach an original resolution that is internally satisfying" (p.60) when faced with conflict. Again the ICPS is among the recommended curricula. Haggerty, Sherrod, Garmezy and Rutter (1994) recommend ICPS's conflict resolution strategies, Weissberg's Stop Light conflict resolution model, Elais and Clabby self-control and social decision making conflict resolution model and the Comer Process which includes lessons in resolving conflict in a comprehensive community-school attachment process. Deborah Prothrow-Stith (1991) recommends conflict resolution and peer mediation training to facilitate positive school environment. In her experience, most students "have never had a chance to reflect in that way before" (Prothrow-Stith, 1991, p. 177) and welcome the chance.

Johnson and Johnson's (1996) review of the research on conflict resolution

and school attachment reveals that surveys show that unresolved conflict has "potential destructive outcomes" that include "physical risks, social isolation, humiliation, loss of status, lowered attendance, and personal feelings of confusion, anger, helplessness and depression" (p.482). One study showed that students found "the physical risks a secondary consideration and instead feared social isolation, humiliation and loss of status" (Johnson & Johnson, 1996, p. 482). When conflict remained unresolved students "feared hostilities would escalate and peers would choose sides" (Johnson & Johnson, 1996, p.482) in a conflict situation. As the conflict increased tensions "attendance and academic work often suffered" (Johnson & Johnson, 1996, p. 482) despite the fact that often students "did not understand why the fight occurred and mourned the loss of a friend" (p. 482). In another study Johnson and Johnson found that increases in conflict between friends longitudinally predicated detachment from school and lower grades (p.482).

Crawford's (1996) prescription for schools that are "safe, social justice and cooperative learning environments" (p.14) begins with the statement that "conflict resolution is responding to the challenges" (p.14). Conflict resolution education provides both the "individual behaviors to reduce violence and promote responsible citizenship and the school system change necessary to create an atmosphere" (Crawford, 1996, p.14) that ensures attachment and learning. "Conflict resolution programs provide long-term changes in attitudes" (Crawford, 1996, p.14) that improve the school and the lives of the students. Conflict resolution becomes "a life-style" (Crawford, 1996, p.15).

Conflict Resolution and Social Skills-Problem Solving

Another area that is consistently measured in the conflict resolution literature is change in social problem solving skills. In Larson's (1994) review of conflict resolution curricula he states that "the distinction between social skills training (e.g.: problem-solving and communication skills) and violence prevention is blurred at best" (p.151). Although different programs vary somewhat "most social problem-solving programs include six major problem-solving steps: 1) identifying the problem, 2) determining goals, 3) generating alternative solutions, 4) examining consequences, 5) choosing the solution, and 6) evaluating the outcome (Forman, 1993, p.38).

Although the first attempts to develop and evaluate a theory of social skills training were recorded in the literature in 1941 by Miller and Dollard and Chittenden in 1942, the more comprehensive theoretical and empirical work of Bandura followed in the 1960s (Forman, 1993). Bandura's work established the importance of observational learning as well as operant learning of social skills. Dozens of studies confirm that social skills training can improve peer relations, decrease aggression, improve classroom climate and behavior (Forman, 1993). Decades of Goldstein's research indicate that skills must be used in a "natural social setting" (Forman, 1993, p.56) to become internalized. In general, skills enhancement programs in the classroom have been found to increase positive peer relations while decreasing anxiety and aggression (Forman, 1993). Although not all social skills programs include the conflict resolution step of role reversal or paraphrasing, Meichenbaum's work with social skills and stress management

suggests that this step should be considered an essential component for social skill and stress reduction programs, as well (Forman, p. 110, 1993).

Despite some program differences, Forman's (1993) review of the history of social skills research finds that most programs which increase social skills "have been found to offset the risk of emotional and social problems posed by high stress and/or physical vulnerability in children and adolescents" and furthermore, "the absence of these coping mechanisms increases the likelihood that emotional or behavioral disorders will occur even under conditions of moderate stress and no physical vulnerability" (Forman, 1993, p.154). Most research reviewed does "underscore the importance of school-based programs that are preventive in nature and that aim to develop general emotional and social competence in children and adolescents" (Forman, 1993, p.154).

Social and emotional intelligence and abilities may be more important to the child's welfare than IQ, according to Goleman (1995). In one study Goleman (1995) cites, boys with above average IQ scores were failing in school because they were impulsive and anxious. As Goleman (1995) tells us, "despite their intellectual potential, these are the children at highest risk for problems like academic failure, alcoholism and criminality--not because their intellect is deficient, but because their control over their emotional life is impaired" (p.27). There may be "no psychological skill more fundamental than resisting impulse. It is the root of all emotional self-control" (Goleman, 1995, p.81).

In the now famous marshmallow test Stanford researchers asked four and five year old children were given a marshmallow and told that if they could wait five minutes to eat it they could have two. If not, they would simply have the one

they had consumed. Years later, when the marshmallow subjects had graduating from high school, researchers found that "those who had resisted temptation at four years of age were now, as adolescents, more socially competent, personally effective, self-assertive...better able to cope. They were less likely to go to pieces, freeze or regress under stress....they embraced challenges, were self-reliant, confident, trustworthy...." (Goleman, 1995, p.82). Later tests showed that those who were less impulsive at four years were "far superior as students" (Goleman, 1995, p.82) with a 210 point average difference from the more impulsive students on the SATs.

A review of these and other related studies indicates that IQ predicts four to 20 percent of career performance. Emotional intelligence may prove a person's success in life (Pool, 1997, p.12). A review of 126 studies including more than 36,000 subjects "found the more prone to worries a person is, the poorer their academic performance, no matter how measured--grades on tests, grade point average, or achievement tests" (Goleman, 1995, p.84).

Social interaction and self-efficacy appear to be so central to a child's well being that some have argued that these motivation systems are "inherent, in our species" (Masten & Coatsworth, 1998, p.208). Children's innate mastery motivation in the area of self-efficacy is "readily observable in the inclination of young children to actively engage with the environment and to experience pleasure (feeling of efficacy) from effective interactions" (Masten and Coatsworth, 1998, p.208). In related research babies exhibit motivation to achieve mastery of social self-efficacy with caregivers (Masten and Coatsworth, 1998) and show distress when they can not interact successfully.

Self-efficacy affects students' choices of activities, goals, behaviors and "predicts such diverse outcomes as academic achievement, social skills, pain tolerance, athletic performances...coping with feared events" (Schunk, 1991, p.207) and many others. People with a low sense of self-efficacy may avoid a task that would benefit them or others for fear of failure. Self-efficacy "is not the only influence on behavior" (Schunk, 1991, p.209) nor is it necessarily the most important. In social and achievement setting, much of a student's disposition will be determined by skills: "high [sense of] self-efficacy will not produce competent performances when requisite skills are lacking" (Schunk, 1991, p.209). In short, when students have an opportunity to resolve their problems successfully and handle problems effectively they develop self-efficacy and motivation dispositions that may enable them to continue to function well. In some instances, students who consider themselves good problem-solvers not only accept, but may actually welcome an opportunity to mediate a conflict well (Heydenberk & Heydenberk, 1997).

Although self-efficacy depends on skill development, "heightened self-efficacy sustains motivation and improves skill development" (Schunk, 1991, p.213) in turn.

Schunk and Cox found that asking students to metacognitively rehearse problem solving by verbalizing important task features and steps while working on problems dramatically improved performance and feeling of self-efficacy. Students who then learned to "fade verbalizations to covert (silent) level" (Schunk, 1991, p.216) continued to successfully self-regulate and solve problems. A student's self-efficacy predicts motivation and achievement across

levels of student ability" (Schunk, 1991, p.220). Regardless of ability, students who consider themselves effective problem-solvers will persist with a positive disposition in the face of difficult problems. However, the relationship between ability and skill level is not simple: "simply possessing skills does not ensure that students will be motivated to apply them" (Schunk, 1991, p.227). Schunk (1991) advises that teachers consider how instruction may affect students' dispositions and "sense of efficacy" (p.227) when designing content. If students "attribute the success to the teacher" (Schunk, 1991, p.227), they will doubt their ability to solve problems on their own. Given a chance to first learn the steps of problem-solving, then practice, review and label strategies, students develop positive dispositions toward problem-solving on their own.

Wentzel, Weinberger, Ford and Feldman (1990) conducted multivariate research to study the relationship between social and emotional factors and academic success. Because there exists "an important developmental link between social and academic competence" (Wentzel et al, 1990, p. 179) and "there is evidence that affective and self-regulatory problems such as...low empathy, aggression and conduct disorders predict low levels of achievement" (Wentzel et al, 1990, p. 179). Wentzel and her colleagues analyzed students' levels of psychological distress, school motivation and academic success. School motivation is a broad construct related to school attachment, including a measure of students' interest and "psychological investment in school related activities" (Wentzel et al, 1990, p. 180). The authors predicted that emotional self-restraint would mediate the relationship between motivation and achievement as well as the relationship between psychological stress or distress and achievement. A

sample of 163 6th grade students from 10 classes in six different schools answered questions such as "Before I do something I think about how it will affect the people around me" and "I don't really get much out of school" (Wentzel et al, 1990, p. 185).

In addition to the distress, restraint and motivation subscale, teachers completed ratings of each student and standardized test scores as well as GPAs were compared. As predicted, the hierarchical regression analysis confirmed that school motivation and stress were mediated by emotional self-regulation or restraint to predict academic achievement. Motivation had a positive relationship with restraint in a nonhierarchical regression analysis. Teachers' ratings of emotional self-regulation and restraint were also related to students' levels of school motivation. Overall school motivation remained the most significant predictor variable for school success and this motivation was mediated by ability to show emotional self-regulation more than the students' present level of distress. The authors suggest that we consider that "social and emotional development may also be important contributors to intellectual development and school success" (Wentzel et al, 1990, p. 189). The authors find little doubt that social and emotional abilities "contribute directly to achievement" (Wentzel et. al, 1990, p.190).

Social competence, including self-regulation and problem-solving style is a "powerful predictor of academic achievement" (Wentzel, 1991, p.1066). In fact, these "interpersonal forms of competence are often more powerful predictors of achievement than intellectual ability" (Wentzel, 1991, p. 1066). Wentzel's (1991) study of the relationship between social competence and academic achievement

found that "socially responsible behavior mediates almost entirely the relationship between students grades" (p.1066) and two other aspects of social competence including sociometric status. Self-regulated behavior appears to be determined by three components including levels of interpersonal trust, interpersonal problem-solving and a sense of social responsibility (Wentzel, 1991, p. 1067). All three of these sub-components of self-regulation have been linked "empirically to objective indices of social competence as well as to intellectual accomplishments" (Wentzel, 1991, p.1067). School success is related to a student's ability to resolve academic and social problems in an adaptive way. As Wentzel (1991) summarizes, "very simply, students who control negative affective reactions to failure and who persist in trying to solve problems achieve more than those who tend to become emotionally upset" (p.1068) in social and academic domains. "Although the link between social and academic problem-solving is not well understood" Wentzel 1991, p.1068) it appears that "the ability to control negative emotional reactions to failure may contribute to both socially and academically competent outcomes" (Wentzel, 1991, p.1068).

Wentzel (1991) found that each characteristic of social responsibility, interpersonal problem solving, interpersonal trust and emotional self-regulation was significantly ($p < .001$) correlated with GPA. Because many of the predictor variables were correlated significantly with each other, simultaneous regression models were used to determine any unique variance among the social competence predictor variables.

A socially responsible disposition explained a significant amount of the unique GPA variance when analyzed with simultaneous regression methods as

well. Socially responsible goals, interpersonal trust, and constructive problem-solving styles were all significant ($p < .001$) independent predictors of a general socially responsible disposition. Personal background and status variables "did not explain an additional, significant amount of variance in social responsibility" (Wentzel, 1991, p.1074).

It is important to note that this is not a popularity contest. Children who are socially competent, capable of higher levels of interpersonal problem solving and relating to peers with respect and trust, but not particularly popular, still enjoy the higher levels of social responsibility and GPA scores. The classes of students who were either popular or neglected by peers but socially responsible and competent, enjoyed relative academic success. The antisocial, aggressive students without interpersonal problem-solving skills were also academically at risk, independent of background and status variables. Again, interpersonal problem-solving and social competence skills seem to immunize, students and increase academic success, "even when controlling for....IQ" (Wentzel, 1991, p. 1076). In conclusion, Wentzel (1992) suggests that "the ability to resolve interpersonal conflicts in adaptive ways may also help explain more precisely the development of both social and academic competence" (p.1077). These studies lead us to "the counter intuitive position that feelings are typically indispensable for rational decisions" (Goleman, 1995, p.28). Considering the "large implications" (Goleman, 1995, p. 183) of the scientific findings, Goleman suggests that "our priority must be to help people better manage their upsetting feelings" (Goleman, 1995, p. 183).

One curriculum that has succeeded in this area includes Duke University's

training sessions for young boys that taught children "to see how some of the social cues they had interpreted as hostile were in fact, neutral or friendly" and how to "take the perspective of other children--to get a sense of how they were being seen and of what other children might be thinking and feeling" (Goleman, 1995, p.23) and how to resolve conflict. Goleman (1995) cites the Resolving Conflict Creatively Program (RCCP) as one comprehensive emotional and social education program. RCCP has, as Goleman (1995) notes "a mission far beyond just preventing fights" (p.277). The RCCP Program teaches students to "calm down...state their position, then paraphrase what's been said" (Goleman, 1995, p.277). Students tell Goleman (1995) "it's changed my way of thinking" (p.277). Goleman (1995) cites the PATHS curriculum and how New Havens Social Competence Program as other programs that teach affective vocabulary and constructive conflict resolution strategies, that increase students' social skills, create a "caring community, a place where students feel respected, cared about and bonded to classmates, teachers and the school itself" (p.280).

Fenley, Gaiter, Hammet, Liburd, Mercy, O'Carrol, Onwuachi-Saunders, Powell and Thornton's (1993) report for the Centers for Disease Control states that training in social skills that includes "nonviolent conflict resolution training...provides students with appropriate standards of behavior, a sense of control over their behavior and improved self-esteem" (p.14). These students are not only less likely to be perpetrators of violence, but are also less likely to "become victims of violence" (Fenley et al 1993, p.14). Brilliant (1995) concludes that the "cognitive mediation or the habits of thought model of violence prevention" (p.1) and conflict resolution training are effective in teaching children

new problem-solving and social skills. She warns that "information alone will not necessarily translate to changes in habits" (Brilliant, 1995, p.1) for students need a more comprehensive approach which allows them to self-monitor and practice these new skills.

Guiliano's (1994) review of conflict resolution programs characterize them as nonviolent problem solving strategies "with new techniques that are creative and based in cooperative learning helping the students develop interpersonal skills...programs must use a variety of teaching methods with special attention given to student-centered learning and involvement" (p.159) to maximize benefits to students, the school and in her case, the entire community. Guiliano and Slaby's (1990) cognitive mediation training, a 12 part curriculum that emphasized assessing others' perspectives and intentions and cognitive conflict resolution skills was first studied with identified aggressive youth. The program research found that the cognitive mediation training "can be successful in changing not only social problem solving skills and beliefs supporting aggression, but also rating of subsequent behavior" (Guiliano & Slaby, 1990, p.275).

Conflict Resolution Steps and Cognitive Reasoning

Increased school attachment and prosocial orientation improve cognitive, academic and prosocial behaviors. As well, cooperative conflict and constructive controversy fuel higher level reasoning. There are several aspects of the conflict resolution process itself that should be examined individually for effect.

The first skill students learn in conflict resolution training is active

listening. Many consider listening skills more important than oral communication (Davidson and Worsham, 1992). Most of us spend 8.4% of our time writing, 13.3 % reading, 23% percent speaking and 55 % listening (Davidson and Worsham, 1992). The active listening and anticipate paraphrasing of conflict resolution procedures increases students' listening comprehension (Heydenberk and Heydenberk, 1999). The paraphrasing, role-reversal and perspective taking required in the conflict resolution process has been researched extensively. Johnson and Johnson (1991) found that students' "reasoning is enhanced [by] the combination of explaining one's knowledge and summarizing and paraphrasing the other persons' knowledge and perspective" (p.299).

David Johnson's (1971) original review and summary of the research on role-reversal first affirms the seminal work of Deutsch, indicating that in a competitive environment it is difficult to effectively resolve problems or conflict because "participants do not have a very complete or accurate understanding of their opponents position or frame of reference" (p.322). In a problem-solving or conflict situation role reversal is "the most direct procedure" (Johnson, 1971, p.322) and the most effective procedure "for increasing understanding" (Johnson, 1971, p.322). It is important to note that engaging in role-reversal or paraphrasing increases understanding, retention and comprehension of all sides (Johnson and Johnson, 1979), but does not increase compromising behaviors (Johnson, 1971). People who engage in role-reversal are more disposed to assertively negotiate a constructive resolution, but they remain as "committed...to their position" (Johnson, 1971, p.324) or more committed. Conflict resolution is therefore more often characterized by synthesizing a new solution than it is by giving in or

compromising ideals or goals. In general, the Johnson's research indicates that role reversal or paraphrasing changes the students' dispositions toward problem-solving, not their ideals, ideas or principles. This "attitude change" (Johnson, 1971, p.326) is essential to the synthesis of a constructive solution that honors both parties' perspectives. The role reversal increases "bias scanning" (Johnson, 1971, p.327) in participants, causing increases in reflection and comprehension.

Johnson and Johnson have studied the effects of conflict and controversy in the cooperative classroom for two decades. Johnson and Johnson (1979) first major review of the academic use of conflict states that "by avoiding and suppressing certain types of conflicts, teachers use valuable opportunities to increase student motivation, creative insight, cognitive development and learning" (p.51). Johnson and Johnson's (1979) hypothesis was that conflict in the academic setting "leads to epistemic curiosity and to a more adequate cognitive perspective and reasoning process" presumably through understanding more accurately the cognitive perspective and reasoning of one's opponents" (p.53). Eventually "a more creative and higher quality conclusion is derived" (Johnson & Johnson, 1979, p.53). When students are in a constructive conflict or controversy they are forced to "predict subsequently what line of reasoning their opponent would use" (Johnson and Johnson, 1979, p.54). Because there is extensive evidence from Kohlberg, Mead, Piaget, and from Flavell, Asch and Johnson and Johnson's (1979) own research in this area, it is possible to say that this perspective taking opportunity is "central to the cognitive development, moral reasoning, self-esteem, social intelligence, cooperation, communication effectiveness, problem-solving and conflict resolution" (p.54). Reviewing 18

studies Johnson and Johnson (1979) state that constructive controversies or conflict resolution will "result in high quality problem-solving or decision making" (p.56). This review also found that "students who experience conceptual conflict...are better able to generalize the principles they learn to a wider variety of situations" (D. Johnson & R. Johnson, 1979, p.56).

In order for conflict or controversy to be resolved constructively and creatively "students need to be sufficiently heterogeneous "and "in a cooperative context" (Johnson & Johnson, 1979, p.60). Indeed, the context and problem-solving and social skills of those involved are often a better predictor of outcome than the nature or severity of the conflict itself. Johnson and Johnson (1979) assert, "perhaps the most important set of skills for exchanging information and opinions is perspective-taking" (p.60). Perspective taking skills are fostered in a cooperative context where students are not defensive or inhibited.

There are several aspects of a conflict positive environment that may enhance reasoning. As we have reviewed, an improved school climate or culture prevents downshifting. Positive affect and social interaction improve academic and cognitive performance. Increased cooperation improves problem solving performance and cognitive flexibility (Davidson and Worsham, 1992).

Peter and Noreen Faccione (Perkins, 1995) of Santa Clara University have studied thinking dispositions using factor analytic techniques. Seven general essential motivational dispositions seem to be particularly significant in effecting thinking. They include truth-seeking, open mindedness, analytically, systematically, self-confidence inquisitiveness and maturity.

Perkins (1995) research has identified negative dispositions as well as

positive. The "my-side bias is an unfortunate thinking disposition, that works against intelligent behavior"(Perkins, 1995, p.278). It is simply that "faced with a decision, "people focus overwhelmingly on evidence favoring their learning and neglect evidence on the other side of the case" (Perkins, 1995, p. 278). This is a disposition already separate from intellectual ability as evidenced by the fact that intelligent people can think effectively and deeply about the side of a case they favor but chose not to apply the same skills to another's perspective. When asked to apply the same skill level to the other side "research shows that people are quite capable" (Perkins, 1995, p.278) of doing so. A biased disposition prevents them from applying their intellectual skill in those cases. Perkins (1995) and his colleagues have a taxonomy of essential thinking dispositions that includes broad thinking, clarifying and seeking understanding seeking and evaluating reasons and metacognitive self-management.

Mihaly Csikszentmihalyi (1996) considers perspective taking to be one of the most important tools for increasing creative thinking. Csikszentmihalyi (1996) prescribes considering a problem "from many different perspectives" (p.367) avoiding "our first impulse to label problems by relying "tried and true prejudices" (p.367). This reversal of perspective increases cognitive flexibility.

Costa (1984) suggests that "evaluating with multiple criteria" (p.160) and paraphrasing" (p.161) are among the most important tools for developing metacognition. Perkins and Salomon (1988) suggest that considering another's perspective requires and develops self-monitoring strategies. Because in virtually all contexts people tend not to give their attention to the other side of the case, these metacognitive dispositions regarding reflecting and self-monitoring are

essential (Perkins & Salomon, 1988).

Johnson and Johnson's (1992) research found that reversing perspectives and then reconceptualizing was the best possible tool for synthesizing a new solution to problems. Neal Whitman's (1988) work reveals that students who "learn materials for their own needs" (p.5) use different, less effective cognitive processing than students who learn something with the expectation of teaching someone else. Paraphrasing may be an important academic tool as well as a social tool.

Shifting to multiple perspectives creates cognitive flexibility or allocentrism as opposed to Piaget's egocentrism. Berman's (1991) review of interpersonal perspective taking found that with these skills "students could move from egocentric and impulsive interpersonal negotiation strategies to mutual and collaborative strategies" (p.13). Finally, at the brainstorming stage of conflict resolution, students engage in a synthesis thinking "that seeks to find the value in each position or idea" (Berman 1991, p.15). This is the essence of Johnson and Johnson's (1996, 1997) integrative thinking.

Klaczynski, Gordon and Fauth (1997) conducted four experiments in relationships among critical thinking, goals, general ability and information processing style. Three types of critical thinking were investigated as dependent variables. A students' general ability did effectively predict two of the three critical thinking measures. However, biases in reasoning were predicted by the students' information processing style. The authors state that "students must conquer the metacognitive challenge of evaluating evidence independently from their goals and beliefs" (Klaczynski, Gordon & Fauth, 1997, p.470). This lead the

authors to conclude that a true measure of intelligence must go beyond natural abilities to "consider metacognitive abilities and dispositions...as central to intelligence as specific cognitive capacities" (Klaczynski, Gordon, and Fauth, 1997, p.472). In this extensive study, the quality of "intelligence is indeed associated with metacognitive dispositions involved in monitoring the flow of one's reasoning and maintaining consistency" (Klaczynski, Gordon & Fauth, 1997, p.472). In short, a student's natural ability does not determine the quality of problem solving or analysis if it is only applied to one side of the problem.

Klaczynski, Gordon and Fauth (1997) state that "critical thinking results from a combination of two ingredients" (p.481). The first ingredient is the competence to use a given critical thinking skill. The second ingredient is the "metacognitive competence not captured by intelligence tests" (Klaczynski, Gordon, Fauth, 1997, p.481). The authors review a range of other studies that find "reasoning is a function of an array of personal dispositions distinct from intelligence" (Klaczynski, Gordon & Fauth, 1997, p.481).

The "metacognitively-oriented individuals" (Klaczynski, Gordon & Fauth, 1997, p.482) have the essential advantage of applying their critical reasoning abilities when and where appropriate. Conflict resolution provides students with opportunities to practice the essential perspective taking skills that correct our "my side bias" (Perkins, 1995).

Karpov and Haywood (1998) suggest that Vygotsky's concept of cognitive mediation has been shown to be the "main mechanism of learning and development" (p.27). The authors analyze Vygotsky's work to distinguish two major types of mediation-"metacognitive and cognitive" (Karpov & Haywood,

1998, p.27). This "metacognitive mediation...has its roots in interpersonal communications" (Karpov & Haywood, 1998, p.27). Cognitive mediation begins with the exploration of academic concepts in school age children. To develop metacognitive skills in children the authors recommend "cooperative, shared activity, under mutual control" (Karpov & Haywood, 1998, p.29). Through self-regulation as well as attempts to help regulate others, metacognition develops. The authors tell us that the effect of these activities on metacognition is "supported by experimental data" (Karpov & Haywood, 1998, p.36) and the ideal "situation for the development of children's self-regulation is one of collaborative problem solving" (Karpov & Haywood, 1998, p.30).

Gilhooly, Keane, Logie and Erdos (1990) offer a similar perspective. To help children increase metacognitive skills the authors suggest paired problem solving where students think aloud with a "listener critic" (Gilhooly, Keane, Logie and Erdos, 1990, p.303) and then reverse roles. Although the authors recommend several types of activities for developing "metacognitive skills" all efforts rely on talk in the context of social interaction as a means for promoting thinking" (Gilhooly, Keane, Logie & Erdos, 1990, p.307). Social interaction and social problem-solving is a "recurrent theme" (Gilhooly, Keane, Logie & Erdos, 1996, p.307) in all the metacognitive development strategies.

Within this recurring theme it is easy to understand how increased academic achievement and "student self-responsibility" (Davis, 1994, p.85) are among the frequently reported results of a conflict resolution program. Several studies (Johnson, Johnson, Dudley, Mitchell and Fredrickson, 1997 and Zins and Forman, 1988) report that conflict resolution's integrative bargaining and

perspective reversal skills leave students empowered to reason and form prosocial bonds on their own. Other studies (Wittmer and Sterling Honig, 1994) report that when children study a comprehensive conflict resolution program, even "aggressive and shy children become more positively social within three months" (p.152) and increased positive social functioning is associated with children's ability to "think of more strategies" (Wittmer, Sterling & Honig, 1994, p. 152) when problem solving. All of these factors may help explain why some conflict resolution programs are associated with "significant increases on their cognitive skills as indexed by the WISC-R (Wechsler Intelligence Scale for Children) revised (Yale Child Study Center, 1996, p.3) and other tests of cognitive performance.

Conflict is such an effective learning tool and "conflict is so vital to development that some experienced teachers go out of their way to highlight or even create situations where kids must think or feel their way out" (Kohn, 1986, p.74). Alfie Kohn (1986) also reminds us that in the case of conflict "the natural supply is abundant" (p.74).

Conflict Resolution Steps and Moral Reasoning

The relationship between cognitive development and moral reasoning has been fairly well established over the decades of research (Bar-Tal, 1976, Eisenberg, 1987). How rudimentary empathy develops into fully developed moral reasoning has also been explored.

There are cognitive processes involved with developing empathy beginning with a minimum degree of "self-other differentiation" (Eisenberg and

Strayer 1987, p.90) and the "ability to role-take" (p.90). Generally empathy is related to prosocial behavior and moral reasoning, but does not predict such behavior (Eisenberg, 1982). In Hoffman's (1987) decades of research on the relationship between empathy and moral reasoning he has explored many stages and types of empathy. The empathy for another's life condition "may develop in childhood" as one acquires the ability to form social concepts, one's empathic distress may also be combined with a mental representation of the plight of an entire group or class of people...This empathetic level can provide a motive base...for the development of certain moral...ideologies" (Eisenburg & Strayer, 1987, p. 52). There are other mediating variables. Efficacy is a mediating variable (Oliner and Oliner, 1988). Eisenburg & Strayer (1987) research finds causal attributions and sympathetic distress affect outcome. As well, moral reasoning or lack thereof determine whether an empathetic reaction and sympathetic distress guilt and blame and anger.

In a conflict positive integrative thinking environment special attention is given to separating people from problems, (e.g.: attacking the problem, not the person) understanding everyone's feelings and emphasizing understanding and problem-solving rather than affixing blame. With anger and fear minimized in the conflict positive classroom setting one might expect "that in the course of a person's development empathetic affects will become meaningfully associated with moral principles" (Hoffman, 1987, p.58). The moral principles combined with a well developed empathetic understanding" might then guide an individual's moral judgment, decision making and action. In some cases, the sequence might be reversed-the moral principle might be activated first and then its associated

empathetic affect elicited" (Eisenburg & Strayer, 1987, p.58).

In a summary of their research Eisenburg & Strayer (1987) suggest that empathy precedes moral principles. At some point in childhood when developmentally receptive, empathy may help "activate related moral principles" (p.64). If the environment provides the ongoing opportunity for "concurrence of empathy and principle" this "may be expected to strengthen the bond between them, increasing the likelihood that both will be operative and will affect moral judgment in future situations" (Eisenburg & Strayer, 1987, p.64). Eisenburg & Strayer (1987) prescribes a "moral education" (p.69) that asks us to consider the context and influences on others as we consider their problems. Finally he prescribes a "curriculum that stressed the common humanity of all people and includes efforts to raise peoples' levels of empathy" (Eisenburg & Strayer, 1987, p.69) for people who are not in our immediate group. Moral reasoning is often developed and applied to in-group members only. Efforts that include "face to face cultural contact and training in role-taking procedures" (Hoffman, 1987, p.69) in combination with "rule systems and empathy-enhancing moral education" (p.69) will strengthen our moral reasoning and cognition.

Empathy generally develops through some forms of conditioning or "through the development of role-taking skills" (Staub, 1978, p.149). As well, decades of research indicate that moral reasoning and moral judgment "correlate with helping others in physical distress" (Staub, 1978, p.259). Again, certain types of perspective taking and affective role taking are related to developing prosocial behavior and moral judgment (p.258, Staub, 1978).

Although "all children are born with a running start on the path to moral

development [including] a number of inborn responses [that] predispose them to act in ethical ways" (Damon, 1999, p.73), the environment and school setting may have a dramatic impact on the rate of moral development. The "study of moral development has become a growth industry within the social sciences" (Damon, 1999, p.73). From a review of this research we may conclude that "no single case can account for either moral or immoral behavior" (Damon, 1999, p.73). From Damon's (1999) research he concludes that "interactions with peers can spur moral growth by showing children the conflict between their preconceptions and social reality...children who participating actively in the debate, both expressing their opinions and listening to the viewpoints of others, were especially likely to benefit" (p.77) from increased moral reasoning.

Some research using Kohlberg's stages has shown that children who are exposed to moral reasoning discrepant from their own stage and somewhat more advanced will prefer that reasoning to reasoning somewhat below their own stage (Staub, 1978, p.49). Role-taking opportunities seem to determine a child's ability to reason morally at a higher level. Kohlberg tells us that teaching moral virtue alone doesn't work without experiencing the role-taking and reasoning first-hand (Staub, 1978, p.52). The integrative environment may help us meet our goal of providing tools of a "shared convictions...a shared way of thinking through ethical issues" (Strike, 1995, p.118).

From the extensive research on Kohlberg's moral theories, there is substantial evidence that moral reasoning is nurtured and developed through moral discussions which induce cognitive conflict and through resolution of interpersonal conflicts (Goldstein, 1988). Ideally, the discussions of conflict

would provide role-taking or perspective reversal opportunities to maximize moral reasoning.

There is sufficient, even abundant "research evidence...that moral dilemma discussion groups can successfully enhance moral reasoning" (Goldstein, 1988, p.292). Goldstein (1988) feels that in order to enhance moral reasoning at least three conditions must be met: "role-taking opportunities through reciprocal social interaction, cognitive conflict regarding genuine moral dilemmas, and exposure to the next higher stage of reasoning" (p.292). Studies that have used genuine "real-life situations" (Goldstein, 1998, p.293) to resolve conflict and consider moral reasoning, have shown a positive effects. In fact, "the most effective moral education interventions occur with discussion of real dilemmas in the context of a real group (e.g.: the classroom or the family) (Goldstein, 1988, p.295). Conflicts in the classroom provide rich resources for the teacher.

Kohn (1990) contends that when the classroom is simply a place where children "obey" rather than "help to make meaningful decisions, it is very difficult to abandon autocracy later" (p.164) and expect high level moral and academic reasoning. Relatively minor hurts and humiliation can destroy trust and attachment in the classroom. The research "studies over more than half a century show that when adults use disciplinary approaches variously described as highly controlling, power-assertive or just plain punitive, children become more disruptive, aggressive and hostile" (Kohn, 1990, p. 168). In fact, a child who is often and harshly punished by his parents is "more likely than other children to break rules when he is away from home" (Kohn, 1990, p.168). Because the short-term results of punishments often are that the desired change is effected, it is easy

to be distracted from the body of research on the long term results. The long-term results of punitive control instead of reasoning are that children calculate risks "figuring out when they can get away with something" (Kohn, 1990, p.168). Another effective argument Kohn (1990) makes against punitive classroom control is that such control emphasizes the consequences to "them" the student (p.172) . In other words, the reason we don't rob the bank or hurt a classmate should be that it is unethical and that it harms others, not that we could get caught or punished.

The use of punishment when we could choose reasoning leads to "the lowest level of moral reasoning" (Kohn, 1990, p. 172). When we call on students to reason they begin to care about why as well as what they do. Reasoning and dialogues give students a deeper understanding that has more long-term effect on beliefs and behavior. Kohn (1990) cites collaborative or cooperative learning as "one of the most exciting developments in modern education" (p.214) for exactly this reason.

Kohn (1990) also cites "listening" (p.241) and "perspective-taking as essential to the growth of reasoning, respect and a prosocial orientation," (p.244). Kohn (1990) prescribes cooperative learning, respectful listening, perspective-taking, class-meetings and unity building activities for our students.

Kohn argues that the belief among "most scholars" (Kohn, 1990, p.65) is that "moral emotions are a natural component of a child's social repertoire" that is present at birth. Furthermore, Kohn (1990) tells us that increased "self-reflection can promote prosocial action to the extent that it reminds one of moral obligations or internalized expectations" (p.74). Thus if one does not consider oneself a

morally disposed being, such self-reflection will not promote prosocial action. A depressed negative mood will inhibit prosocial action in some subjects. In addition to the self-reflection and mood issues, the perceived level of efficacy and guilt may motivate prosocial action. Indeed feeling guilty makes some people more generous or helpful and understandably, many will not take action if they do not feel they are going to be effective.

There appears to be an indirect relationship between a healthy level of self-esteem and prosocial action. Some researchers (Kohn, 1990) have suggested that children who have a reasonable level of self-esteem are not self-conscious and preoccupied with their insecurities and inadequacies, making it possible for them to think of others and empathize. There are "qualifications" (Kohn, 1990, p.79) in that children who are very egotistical and appear to have very high levels of self-esteem may be too preoccupied with themselves to empathize with others. Neither self-esteem nor empathy alone guarantee prosocial action without other skills, but there is a strong relationship between efficacy empathy and prosocial behavior. In fact, despite the distributive notion that caring about others is the opposite posture of caring about one's self, there is evidence that both types of caring are compatible" (Kohn, 1990, p.78). In fact, there is evidence that good inferential skills and "assertiveness is associated with prosocial behavior" (Kohn, 1990, p. 78). Assertiveness and a sense of self-efficacy may be better predictors of prosocial activity than sympathetic understanding alone. Social skills and prosocial behavior also show a positive relationship.

There are several ways empathy develops in a child, among them are affective role-taking and inductive techniques "which encourage the child to

imagine that he was in the place of a person who was hurt" (Goldstein, 1988, p.55). Although, not all role taking in a cooperative "prosocial situation is effective...[and] role-taking practice in competitive situations may not lead to increased empathy" (Goldstein, 1988, p. 55), generally training in perspective taking increases empathy and understanding.

Extensive research has shown that empathetic affect and understanding contributes to consideration of and acceptance of moral principles and motivation to act on accordance with those principles Eisenburg & Strayer (1987). Staub (1987) considers empathetic understanding" as a source of moral principles" (p.111) as well as "moral value orientations" (p.111). It is essential to Staub to create an "a bond between self and others" and a "caring" in order to produce "the basic components of a prosocial orientation" (p.111). Without bonds and empathy, "moral development resembles simple rule orientation" (p.112). Empathy and bonds are therefore the source or component of a true "principle of justice" (Staub, 1987, p.119). Second, Staub (1987) tells us empathy serves as a "motive" (p.113) affecting dispositions towards moral action and reasoning. Hoffman's (1982) review of the research shows that "empathetic affect is most likely to be generated when we try to imagine how we would feel if the stimuli impinging on the other person were impinging on us" (p.284). This "cognitive restructuring or transformation of events...is a subject to conscious control" (Hoffman, 1982, p.284). Moral motives, dispositions and reasoning are related to "complex cognitive processes" (Hoffman, 1982, p.311). From Feshbach's (1982) research a model of empathy and reasoning has "evolved" (p.320) which considers both empathy as well as affective and cognitive factors. Feshbach's first

component is a child's ability to recognize the affective states of others. The second cognitive factor is the "more advanced level of cognitive competence required to assume the perspective and role of another" (Feshbaum, 1982, p.320).

For two decades research has confirmed that "morals develop within a social environment, which is why classroom discussion is important" (Bohning, Hodgson, Foote, McGee & Young, 1998, p.276). Lawrence Kohlberg's research lead him to the conclusion that moral reasoning is best fostered in what he termed just communities where students resolved their real life moral dilemmas and conflicts. There exists abundant evidence that relevant, real life conflicts are more meaningful to students and consequently more actively processed (Costa, 1991, p.137). Additionally, the perspective taking or role taking a necessary for conflict resolution, integrative thinking or discussing moral dilemmas is "one of the most important means of helping students reflect on their own thinking" (Berman, 1991, p.130).

Oliner's (1988) classic study of altruism tells us that "predispositions represent an inclination toward a given behavior not an inevitably programmed responses" (p.120). The Oliners studied 406 non-Jewish rescuers of Jews in Europe during World War 11. They also interviewed 126 non-rescuers and 150 survivors. Their study was "guided by several key questions, including: Was rescue primarily a matter of opportunity or was rescue a matter of personal attributes ...a relatively enduring predisposition to act selflessly on behalf of others?" (Oliner & Oliner, 1988, p.3). In general the rescuers work continued daily for years. They had very little in common culturally with their Jewish guests, but their common humanity--which was constantly denied by Nazi

propaganda. The rescuers generally did not disclose their activities and had little or no external approval and indeed thousands of rescuers died because of their efforts, (Oliner & Oliner, 1988, p. 7).

Religious affiliation "did not distinguish between rescuers and non rescuers" (Oliner & Oliner, 1988, p.156). Rescuers and non rescuers did differ in how they interpreted their religion--rescuers finding all of humanity deserving of forgiveness, tolerance and "respect" (Oliner & Oliner, 1988, p. 157). More important than religion, levels of patriotism or economic status beliefs were the ideologies associated with egalitarian views. Parents of rescuers and non-rescuers were "equally concerned with social convention...matters of propriety--manners, politeness, tidiness, cleanliness, and refraining from the use of obscenities" (Oliner & Oliner, 1988, p. 162). One dramatic difference was that parents of rescuers "were significantly less likely to emphasize obedience" (Oliner & Oliner, 1988, p. 162). Only 1 % of rescuers felt obedience was important to their parents (Oliner & Oliner, 1988).

Bystanders were 12 times as likely to think obedience was emphasized (87%). Rescuers cited "equity" or "care" (Oliner & Oliner, 1988, p. 163) as their motivation. Eighty three percent of the rescued survivors characterized their rescuers motivation as care or equity. This equity was described by the Oliners (1988) as "Equity, as it emerges from the Kantian tradition of Western Moral philosophy [and] includes the concept of fair exchange...to the mutual benefit of all concerned...and includes notions of fair procedures....Fairness as the focal standard of equitable values" (p.163).

Rescuers scored significantly higher in percentages than non-rescuers in

placing importance on ethical values--"truthfulness, respect" and fairness" (Oliner & Oliner, 1988, p.164). Words characterizing care (hospitable, concerned, loving) were "voiced significantly more often by rescuers as they recalled values" (Oliner & Oliner, 1988, p.164) learned from parents. These values were more important to rescuers than reciprocity and fairness. Rescuers were also "significantly more inclusive" (Oliner & Oliner, 1988, p. 165) when delineating groups to whom they should extend their ethical values. The rescuers were two or three times as likely to extend fair, ethical values "to all human beings" (Oliner & Oliner, 1988, p. 165). In general "justice, equality and respect" and a "universal equitable principle" (Oliner & Oliner, 1988, p. 166) characterized rescuers more than bystanders.

As well as ethical reasoning, rescuers were characterized by higher levels of attachment and more satisfying "personal bonds with others" (Oliner & Oliner, 1988, p. 174). Rescuers had higher scores than the other no rescuers on the Social Responsibility Scale that assesses attitudes and dispositions regarding extending help to others when there is nothing to be gained. Although many students (Eisenburg, 1986) "found adult empathy to be a good predictor of altruistic responses" (p.173). The Oliner study found the rescuers and non-rescuers did not differ significantly in levels of generalized empathy on the Empathy Scale. Emotional empathy alone does not necessarily lead to action. Attitudes and dispositions regarding equity, efficacy and personal responsibility (as measured by the Prosocial Action Orientation and Social Responsibility Scale) combined with emotional empathy to lead to action. In short, rescuers showed a "greater proclivity toward attachment to others" (Oliner & Oliner, 1988, p.175) as well as

an "inclusive orientation" (p.175), high levels of empathy and a positive disposition toward prosocial and ethical action.

The rescuers "strong sense of personal efficacy" (Oliner & Oliner, 1988, p.177) relative to non-rescuers as measure on the Internal External Locus of Control Scale indicated that more rescuers felt they were capable of handling problems. (For instance, "when I make plans, I am certain that I can make them work" (Oliner & Oliner, 1988, p. 177). Curiously, there were no differences in self-esteem measures between rescuers and non-rescuers, although rescuers were significantly more likely to perceive themselves as having high levels of personal integrity. In Oliner's study "moral decisions arise as much out of affiliation as through autonomous reasoning" (Oliner & Oliner, 1988, p.258) through attachment and caring and thoughtful independence. The Oliners (1988) prescription for our schools is simply that we need to build "caring institutions--institutions in which students, teachers...and all others receive positive affirmation for kindness, empathy and concern...Students also need opportunities to consider broad universal principles that relate to justice...In short, caring schools will acknowledge diversity on the road to moral concern. Schools will "invoke emotion and intellect in the service of responsibility and caring" (p.259). A caring family and school community "can be a means toward attachment to a more inclusive group" (Oliner, & Oliner, 1988, p.259) and a safer world for our students and children.

Damon's (1999) research on children's moral development has lead him to conclude that children have "a far richer sense of positive morality" (p. 75) than most models indicate. Preschool children often explained actions such as sharing

or even giving away goods by explaining that they want a friend to "feel nice" or "we should all get the same" (Damon, 1999, p. 75). Explanations for sharing often include the concept of reciprocity reasoning such as "she shares her toys with me" (Damon, 1999, p. 75). Damon's (1999) moral reasoning experiments brought groups of 4 children at a time into the lab. The ages of children in the groups were four to six and eight to ten years of age. Children were asked to make necklaces and bracelets out of the beads provided for them. The jewelry was given to the experimenter when completed. At that time each group of four children was given 10 chocolate bars. They were to decide amongst themselves how to fairly divide the reward. One control group was given cardboard rectangles instead of chocolate. Although the control group did act "more generously toward one another" (Damon, 1999, p. 75), the chocolate group children did not abandon their ideals, moral reasoning or sense of fairness. Among groups the "older children were more likely to believe in fairness and to act, accordingly, even when such action favored others" (Damon, 1999, p. 75). Damon (1999) found that children who were involved in "debates about dividing the chocolate...seemed to pick up new, more informed ideas about justice...Peer debate had heightened their awareness of the rights of others" (Damon, 1999, p. 75). Damon believes that such discussion and interaction with peers "can spur moral growth" (Damon, 1999, p. 75).

Summary

Two decades of research on school-based conflict resolution initiatives have largely focused on student social competence, school climate, and school

attachment. In all of these areas, conflict resolution programs have proven to be effective. A related body of research has shown that, even when controlling for intelligence differences, social competence and affect regulation are powerful predictors of competent academic reasoning. Furthermore, studies have shown that analysis of conflicts in academic settings may increase epistemic curiosity and reflection. Studies have also shown that the development of moral reasoning is enhanced by an increased sense of social attachment and the ability to take the perspective of others. While behavioral and social outcomes of conflict resolution programs have been explored, little attention has been accorded the underlying mental processes such as metacognition and moral reasoning which may contribute to changes in behavior.

Chapter III

Introduction and Rationale

There are between five and ten thousand conflict resolution programs extant in American schools (NIDR, 1997). The research on these programs conducted over a period of approximately two decades has documented the positive program outcomes of conflict resolution programs, raised skepticism on some issues, and has ignored a number of important issues. Most simple stand-alone conflict resolution programs (rules/steps posted in a classroom with little curriculum integration and few opportunities to practice) produce little, if any, effect beyond reduced aggression and suspensions (Prothrow-Stith, 1991). However, comprehensive conflict resolution programs often produce dramatic changes in integrative (versus distributive) thinking styles (Johnson and Johnson, 1996), among other changes.

Questions of mental processing of students who have undergone conflict resolution training are paramount but overlooked by researchers. During pilot studies the researcher asked students how they had changed since conflict resolution training. The most frequent expression was, "Now I stop and think." The stop and think answer was more common than all other responses combined, suggesting a major change in students' mental approaches to issues. As well, two

treatment teachers reported that students take significantly more wait time before answering questions after conflict resolution program implementation. These observations from pilot studies and teacher interviews appear to reflect changes in metacognitive reasoning and may also reflect changes in moral reasoning. However, despite these indicators and the importance of mental processing, there is a paucity of empirical information pertaining to the influences of conflict resolution programs on students' metacognition and moral reasoning.

Purpose of the Study

The purpose of this study was to investigate changes in students' dispositions toward metacognition and moral reasoning as a result of their placement in a conflict positive/integrative thinking environment provided by a comprehensive conflict resolution program. The following hypotheses were investigated.

Hypothesis I: Conflict resolution skill development will positively affect use of metacognitive strategies.

Hypothesis II: Conflict resolution skill development will positively affect students' moral reasoning.

Sample

The sample was comprised of fourth and fifth grade students from a Bucks County school district and from the Philadelphia School District. The Bucks County school district is one of the 14 southern municipalities in Bucks County.

Among the 14 southern municipalities in Bucks County, the school district under investigation ranked second from the highest in child abuse, rate of families living below the poverty level, and spouse abuse. The Bucks County school district has approximately 520 elementary students in two schools. The majority of the students are from lower-middle class families. The demographics for the Bucks County district show the population to be 65% Caucasian, 30% African American, and 5% is designated as "other". However, because a disproportionate percentage of Caucasian students attend the local parochial school, our public school sample is 50% African American and 50% Caucasian.

The Philadelphia school under investigation is in north Philadelphia, and has a high rate of violence and unemployment relative to other Philadelphia neighborhoods. The sample was drawn from one elementary school that serves approximately 500 kindergarten through fifth grade students, 95% of whom are African American and five percent of whom are either Hispanic, Caucasian or Asian. One hundred percent of the students in the Philadelphia school sample qualify for the free lunch program.

All of the students in the treatment classrooms were fourth grade students whose teachers had participated in the Peace Center's training called Project Peace. The comparison group students in Philadelphia were also in fourth grade. The Philadelphia comparison group teacher was not available for training, as she had been employed in a nearby school at the time of the training. The two Bucks

County school's comparison group teachers were not available for training because of personal reasons (a medical leave and family business). The Bucks County comparison group consisted of two fifth grade classrooms. There were no significant differences between any of the classrooms on any of the treatment measures, with the exception of a difference on the metacognition scale for the year-three Bucks County school groups.

Despite support from administration and counselors for the Project Peace evaluation and their efforts to keep treatment and comparison groups separated, there was significant contamination of the Bucks County comparison group in year three. Students in the comparison group were exposed to peer mediation on the playground and attended assemblies about the mediation program. Consequently, several of the comparison group students knew the steps of mediation and were enthusiastic about the program. For this reason, the study was analyzed with and without the year-three sample.

All seven teachers in the study have between 20-31 years of teaching experience. From questionnaires and observations, we have found that the teachers generally employ similar teaching methods in all classrooms within each of the two schools.

The Peace Center: History and Program Description

Founded in 1982, The Peace Center is located in Langhorne, PA., a suburb north of Philadelphia, PA. The Peace Center was founded to promote "A global

anti-war focus” and “a local pro-peace stance” according to former Director, Brian Conklin. Although the Peace Center staff, officers, and trainers continue to provide a voice at national and international peace conferences, for the last 12 years the primary focus of the Peace Center’s programs has been conflict resolution and mediation education in the schools and in community programs.

The Peace Center’s stated mission is:

To educate, empower, and support individuals and organizations in efforts to
Prevent violence, promote peaceful resolution of conflict and foster inclusive,
equitable, and safe communities locally and nationally.

According to former Director, Brian Conklin, the Peace Center works toward “Creating a new generation of peace makers, while simultaneously empowering those already involved in peace making efforts”. The numerous programs that are offered by the Peace Center include community mediation, multicultural community dialogue groups, summer peace camps, and partnerships with the justice system for spouse abuse therapy, and juvenile delinquency anger management programs. The school programs, which at this writing have been implemented in approximately 50 schools, include: Creating Peaceable Schools, a conflict resolution-anti bullying curriculum for elementary schools; Ventures in Peace—for middle and high schools; peer mediation programs; anti-racism programs; and school security assessment programs for all grade levels. The Peace Center employees approximately 12 people and depends on additional part-

time employees, along with a cadre of volunteers. Peace Center trainers have extensive experience in conflict resolution and mediation training, and hold advanced degrees in psychology, education, and law.

The Project Peace treatment curriculum is a comprehensive, integrated conflict resolution program that includes teacher training. Project Peace teachers received approximately 12 hours of conflict resolution inservice training conducted over several days. The Project Peace inservice was followed by weekly or biweekly support meetings facilitated by Peace Center trainers for the teachers. Project Peace classroom strategies included: class meetings, conflict resolution centers, use of "I statements", peer mediation training for students, and development of affective vocabulary.

Design of the Study

This study employed a pretest-posttest comparison group design. Intact classrooms were used, reducing the threats of reactive arrangements. This design controls for "the main effects of history, maturation, testing and instrumentation" (Campbell and Stanley, 1963, 0.48).

For each year, groups were pretested during late October or early November and posttested in May or early June. The researcher conducted all of the testing. The Student Attitude About Conflict (SAAC) and the Dispositions Toward Moral Reasoning and Metacognition (DMRM) served as criterion measures. All items on the SAAC and the DMRM were read aloud to students by

the researcher to accommodate a range of reading and oral vocabulary abilities within the classes. Questions regarding vocabulary were entertained by the examiner to ensure intelligent responses to items. All student responses were anonymous; therefore group means were obtained for comparison purposes. The classroom teachers were in the room during the administration of the aforementioned instruments to provide student assistance when indicated.

The treatment group teachers received approximately 12 hours of conflict resolution-peer mediation training subsequent to the aforementioned pretesting. The initial 12 hour training were conducted over three days by Peace Center trainers, both of whom hold graduate degrees in education and have extensive classroom experience. The training includes a review of relevant curricula (steps of conflict resolution), role-plays, theoretical background, group discussion, and two presentations by teachers from the Philadelphia School District who represent programs previously established by the Peace Center. Biweekly support meeting with the conflict resolution trainers were provided throughout the school year. The Peace Center personnel conducted conflict resolution training and follow-up support meetings.

Instruments:

Three instruments were used in the study. The first was a modified form of the Students Attitudes About Conflict scale (SAAC) by Jenkins and Smith, 1992 (see Appendix A). This test was used to verify implementation of conflict

resolution strategies in the classroom (the independent variable in the study). Developed by the New Mexico Center for Dispute Resolution to measure the effects of a statewide conflict resolution education initiative, the SAAC is comprised of 32 items that were selected after determining their reliability. This study involved 1200 fourth through twelfth grade students in New Mexico public schools during the 1986-1987 school year. The item-total correlations were examined and items with values less than .20 were discarded, resulting in the final version of 32 items. Factor analytic procedures were used to examine the constructs underlying the SAAC items. As a result of the factor analytic procedures four underlying factors corresponding to four clusters of items were identified. These underlying factors were labeled as the four subscales of this instrument. The four subscales that were identified by the test developers are:

Subscale	Reliability
School Attachment	.75

Sample Scale Items:

I don't like school very much

My teachers really care about me

Self Esteem	.72
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Sample Scale Items:

Most of the time I feel good about myself

I think most people at school really like me

Conflict Resolution .71

Sample Scale Items:

Sometimes a person doesn't have any choice but to fight

If someone hits me I usually hit him or her back to get even

Social Skills .50

Sample Scale Items:

**Other kids will think I'm afraid if I don't fight when someone
makes me mad**

Other kids think I cause a lot of trouble

A yes-no response format was substituted for the four point Lickert scale because the scale was considered by the researcher to be too difficult for some members of the sample of elementary students used in this study. The decision to adopt the yes-no format was predicated upon several years of administering the SAAC to classes of students who share similar attributes to the sample employed in this study.

The second instrument used was the Dispositions Toward Moral Reasoning and Metacognition scale (DMRM). The dispositions Toward Moral Reasoning and Metacognition scale was developed by the researcher for the purpose of use in this study using the CRESST metacognition Self Assessment Questionnaire. Because "unfortunately" [there are] few standardized measures of metacognitive skills" (O'Neil & Abedi, 1996, p. 234), researchers at CRESST

(Center for Research on Evaluation, Standards, and Student Testing) have developed a Metacognition Self-Assessment Questionnaire. The questionnaire is comprised of twenty items, five in each of four subscales. The subscales are: awareness, cognitive strategy, planning and self-checking. O'Neil & Abedi, the authors, found these metacognitive subscales fairly reliable (alpha above .70) and one-dimensional (one factor per subscale). As well, the authors found the construct validity "acceptable" (O'Neil & Abedi, 1996, p. 234). The authors "approach to validation in this study relied heavily on construct validity techniques as well as content validity (O'Neil & Abedi, 1996, p. 236). Items were written to be consistent with the authors' constructs of planning, self-checking, cognitive strategy use and awareness. The items were then presented to "multiple groups of students in successive studies to examine its psychometric characteristic" (O'Neil & Abedi, 1996, p. 237). Means and standard deviations were obtained for each item and for each subscale. Factor analysis was used to determine whether each item was one-dimensional or multidimensional, fitting more than one subscale. All items that were not reliable or had a low item remainder correlation were removed. Twenty of the original 39 items were retained. Final subscale reliabilities ranged from .82 for the awareness subscale to .87 for the self-checking subscale. Construct validity was determined by comparing the metacognition items and subscales to achievement test results.

High performance on various achievement measures were correlated with high scores on the metacognition instrument.

Because the metacognition inventory was developed for high school students and was less reliable with younger students and because the inventory was designed for use with a specific academic test, the Metacognition Self-Assessment Questionnaire could not be used for this conflict resolution effect study. The researcher revised each of the five questions in each subscale for general use with elementary school students (see Appendix B for revised items). The ten items, which comprise the Moral Reasoning subscale, were designed to be consistent with Kohlberg's definition of moral reasoning, which embody universal principles of justice, equality, reciprocity, and respect for human rights. The items were inspired by teacher observations and comments pertaining to students' treatment of each other during the two-year pilot study in Philadelphia. All 10 items reflect Kohlberg's aforementioned definition and are designed to assess a sense of justice, respect, and reciprocity in students' interpersonal relationships.

The dispositions Toward Moral Reasoning and Metacognition scale was designed and pilot tested by the researcher on approximately 300 students over a two-year period from 1994-96 in an urban Philadelphia elementary school. The items were modified to ensure understanding by the elementary school sample. The 30-item instrument includes 20 questions pertaining to self-regulation and

other aspects of metacognition and 10 questions that are related to moral reasoning.

Treatment of the Data

Anonymity was required by both school districts participating in this study. Therefore, the student scores were combined to obtain a mean pretest and posttest score on each of the three instruments used in this study: Students Attitudes About Conflict, Dispositions Toward Moral Reasoning, and Dispositions Toward Metacognition. Group means were obtained for two fourth grade treatment classrooms and one fourth grade comparison classroom in the Philadelphia School District over a period of two years. Group means were obtained for two fourth grade treatment classrooms and two fifth grade comparison classrooms in two Bucks County schools over a period of three years. A single tailed t-test was used to determine significant differences between group pretest means and group posttest means on the two dependent variables under consideration, metacognition and moral reasoning. The Students Attitudes About Conflict scale was used to confirm Project Peace program implementation. The .05 confidence level was adopted for all measures under consideration. Because the pretest means of the year-three sample were significantly different from the other pretest means, all data were analyzed with and without the Bucks County year-three sample.

Chapter IV

Results

The research on school conflict resolution programs conducted over a period of approximately two decades has generally affirmed the veracity of these programs, and consequently, the research has provided a framework for conflict resolution program curriculum design. However, some critical questions about conflict resolution programs have not been answered or, for that matter, have they been subject to investigation. For instance, questions of mental processing of students who have undergone conflict resolution training are important but overlooked by researchers. Data obtained from the researcher's pilot studies, observations, and teacher interviews appeared to reflect changes in student's metacognitive reasoning, and it raised questions about changes in student's moral reasoning, as well. However, despite the importance of mental processing, there is a paucity of empirical information pertaining to the influences of conflict resolution programs on students' metacognition and moral reasoning.

Purpose of the Study

The purpose of this study was to investigate changes in students' dispositions toward metacognition and moral reasoning as a result of their

placement in a conflict positive/integrative thinking environment provided by a comprehensive conflict resolution program. The following hypotheses were investigated in this study:

Hypothesis I: Conflict resolution skill development will increase students' use of metacognitive strategies.

Hypothesis II: Conflict resolution skill development will increase students' moral reasoning.

Before addressing these two hypotheses, two other preliminary measures were taken. The first was a measure to determine implementation of the independent variable, conflict resolution training, using the Students' Attitudes About Conflict (SAAC). The second preliminary measure was conducted to compare pretest mean scores of treatment and comparison students on all instruments: The Students Attitudes About Conflict; the Metacognition Subscale; and the Moral Reasoning subscale.

Findings: Full implementation of the independent variable, conflict resolution training, was confirmed in treatment classrooms by comparing the mean of classroom means of treatment and comparison classroom scores on the Students Attitudes About Conflict (SAAC). The SAAC was given as a pretest at the beginning of the school year and as a posttest at the end of the school year. Significant differences on the SAAC were found using a single tailed t-test with an alpha level of .05 in the treatment classrooms. The comparison classrooms, which had no conflict resolution training, showed no significant differences in SAAC scores as affirmed by a single tailed t-test between the pretest and the posttest as seen in Table One and Graphs One and Two.

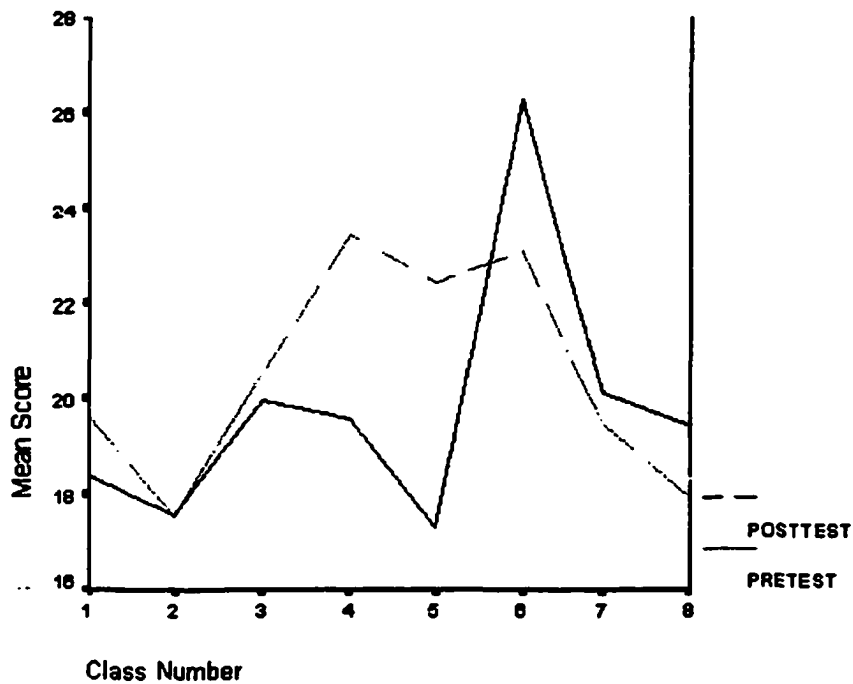
Table 1.

Student Attitudes About Conflict (SAAC)					
	Pretest	Standard Deviation	Posttest	Standard Deviation	t Score
Treatment Group	19.460	1.633	24.568	2.819	9.988*
N=	10				
Comparison Group	20.481	2.288	19.805	.968	0.699
N=	8				

$p < .05$.



Graph 1: Ten treatment groups' mean pretest and posttest SAAC scores.



Graph 2: Eight comparison groups' mean pretest and posttest SAAC scores.

The pretest mean scores of both treatment and comparison groups on all three measures (the SAAC, metacognition subscale, and moral reasoning subtest) were compared. Significant differences were found between pretest mean scores of comparison and treatment groups during year three of the Bucks County group as seen in Table Two.

Table 2.

Pretest Differences Between Treatment and Comparison Group (Bucks County Year 3)			
Scales	Metacognition	Moral Reasoning	SAAC
Treatment Group Pretest	12.187	5.650	19.833
Comparison Group Pretest	14.102	6.065	21.087
Group Differences in Pretest t Score	2.944*	0.984	1.432
Significance	Significant Difference	No Significance	No Significance

***p < .05.**

There were no significant differences found between the treatment group pretest mean scores and comparison group pretest mean scores for any of the other four years of the study as shown in Table 3. However, because significant pretest differences were found in the Bucks County year three sample on the Metacognition subscale, all measures were analyzed with and without this sample. The analysis which included the Bucks County year three sample was reported as Group I. The analysis which did not include the Bucks County year three sample was reported as Group II.

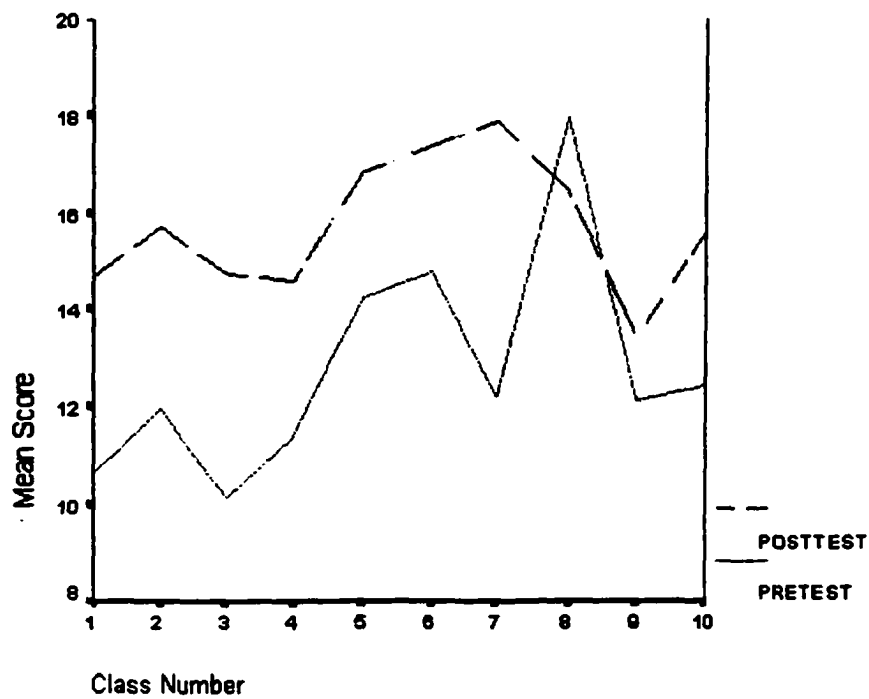
Table 3.

Pretest Differences Between Treatment and Comparison Group I		
Bucks County Student Sample	Mean	t Score
Treatment Pretest Metacognition Scores	11.027	2.544*
Comparison Pretest Metacognition Scores	13.355	
Treatment Pretest Moral Reasoning Scores	5.455	.245
Comparison Pretest Moral Reasoning Scores	5.650	
Treatment Pretest SAAC Scores	18.970	1.052
Comparison Pretest SAAC Scores	22.766	
Philadelphia Student Sample	Mean	t Score
Treatment Pretest Metacognition Scores	13.657	.0532
Comparison Pretest Metacognition Scores	12.715	
Treatment Pretest Moral Reasoning Scores	5.257	1.489
Comparison Pretest Moral Reasoning Scores	4.920	
Treatment Pretest SAAC Scores	18.900	0.362
Comparison Pretest SAAC Scores	18.665	

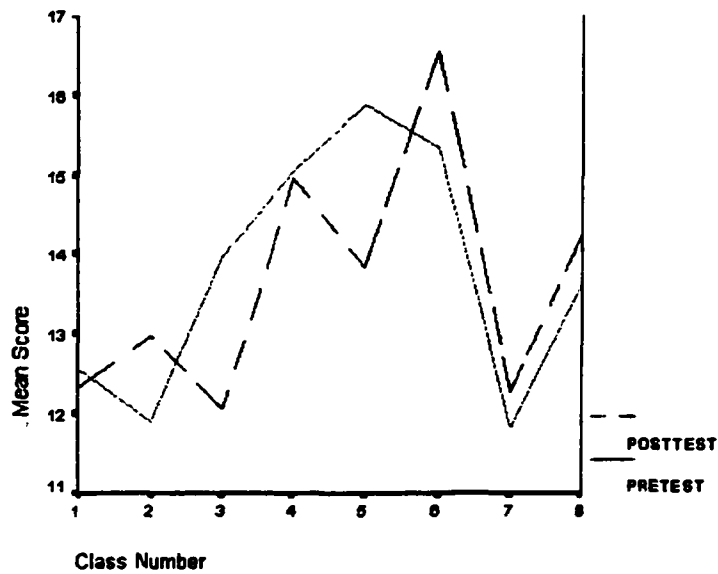
***p < .05.**

Hypothesis I, conflict resolution skill development will increase students' use of metacognition strategies, was pretested and posttested with the metacognition subscale in treatment and comparison groups. A single tailed t-test with an alpha level of .05 was used to determine pretest to posttest changes in the

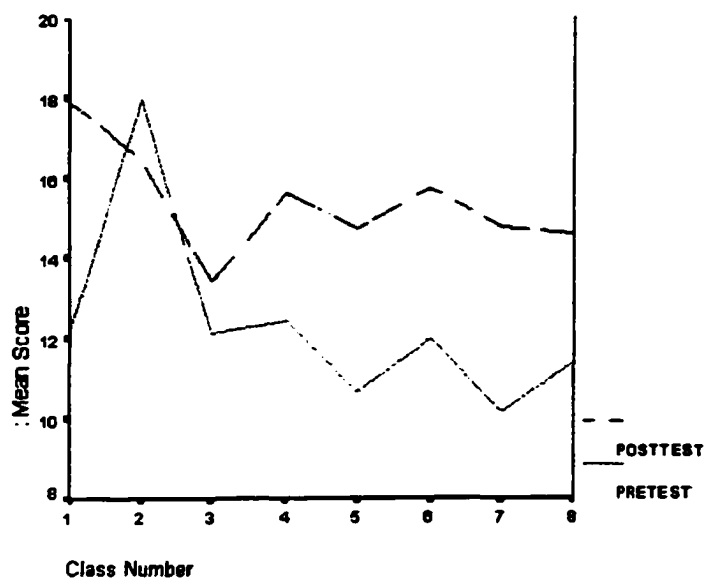
means of classroom means for each group. As Tables 4 and 5 and Graphs 3, 4, 5, and 6 show, treatment groups show significant gains on the metacognition subscale pretest to posttest. Comparison groups show no significant change.



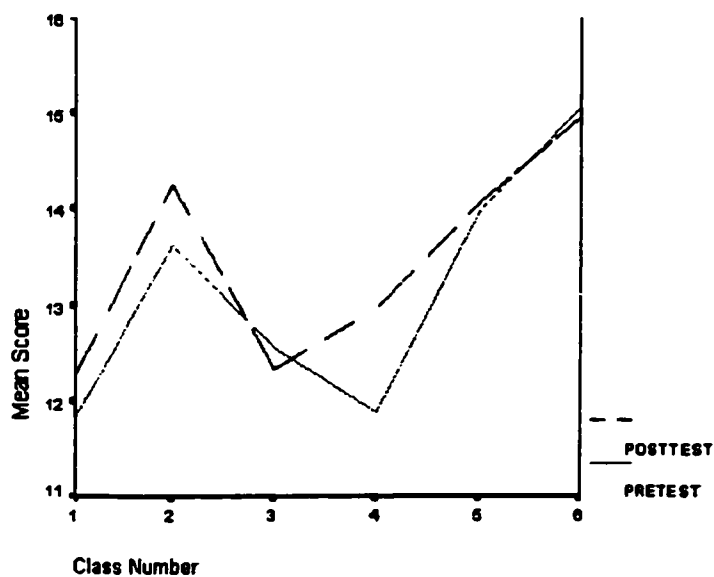
Graph 3: Ten treatment groups' mean pretest and posttest Metacognition scale scores (Group I).



Graph 4: Eight comparison groups' mean pretest and posttest Metacognition scale scores.



Graph 5: Eight treatment groups' mean pretest and posttest Metacognition scale scores (Group II).



Graph 6: Six comparison groups' mean pretest and posttest Metacognition scale scores (Group II).

Table 4.

Metacognition Scale Scores Group I					
	Pretest	Standard Deviation	Posttest	Standard Deviation	t Score
Treatment Group	12.248	2.303	15.719	1.567	3.989*
N=	10				
Comparison Group	13.755	1.577	12.643	1.390	0.250
N=	8				

* $p < .05$.

Table 5.

Metacognition Scale Scores Group II					
	Pretest	Standard Deviation	Posttest	Standard Deviation	t Score
Treatment Group	12.342	2.394	15.381	1.354	3.889*
N=	8				
Comparison Group	13.142	1.283	13.462	1.108	1.592
N=	6				

* $p < .05$.

All treatment classrooms showed significant gains from pretest to posttest mean scores on the metacognition subscale. The comparison classrooms showed no significant gains from pretest to posttest, therefore, hypothesis No. I was accepted.

Hypothesis No. II, conflict resolution skill development will increase student's moral reasoning, was pretested and posttested using the mean of classroom means on the moral reasoning subscale in the treatment and comparison classrooms. Significant changes between pretest and posttest moral reasoning mean subscale measures were found in all treatment classrooms. Using

the single tailed t-test with an alpha .05 level of significance, no changes were found in any of the comparison classrooms as shown in Tables 6 and 7 and graphs 7, 8, 9, and 10.

Table 6.

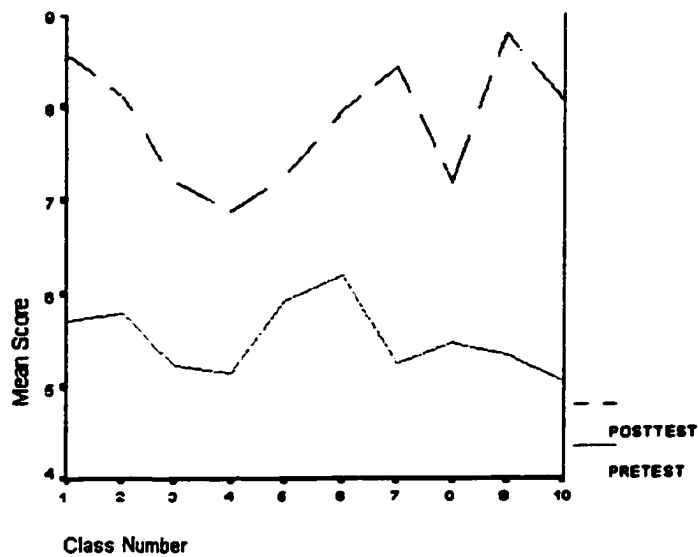
Moral Reasoning Scale Scores Group I					
	Pretest	Standard Deviation	Posttest	Standard Deviation	t Score
Treatment Group	5.493	.375	7.831	1.063	10.032*
N=	10				
Comparison Group	5.649	.667	5.657	1.114	0.025
N=	8				

*p < .05.

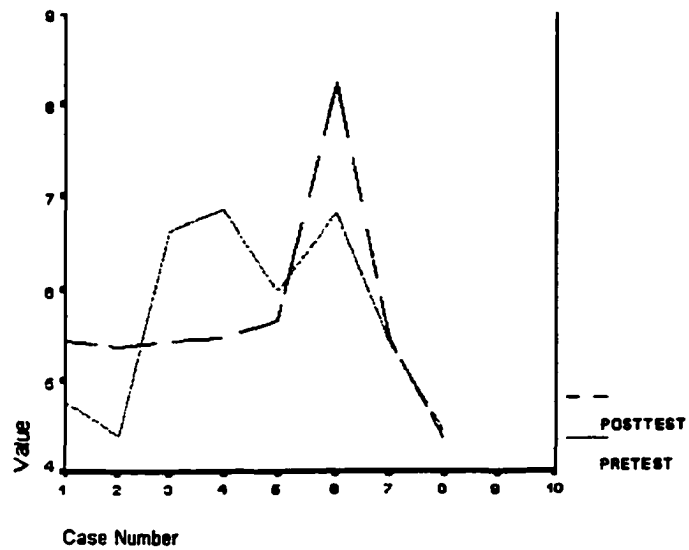
Table 7.

Moral Reasoning Scale Scores Group II					
	Pretest	Standard Deviation	Posttest	Standard Deviation	t Score
Treatment Group	5.356	.261	8.057	1.094	13.775
N=	8				
Comparison Group	5.232	.587	5.232	.443	.444
N=	6				

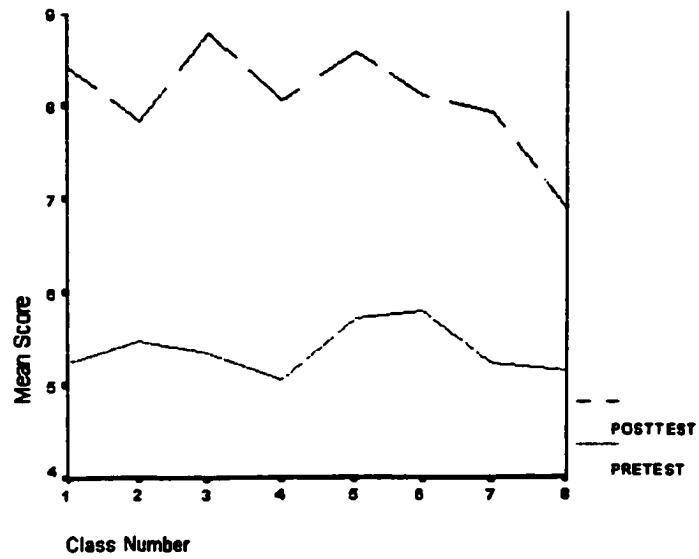
*p < .05., 7, 8



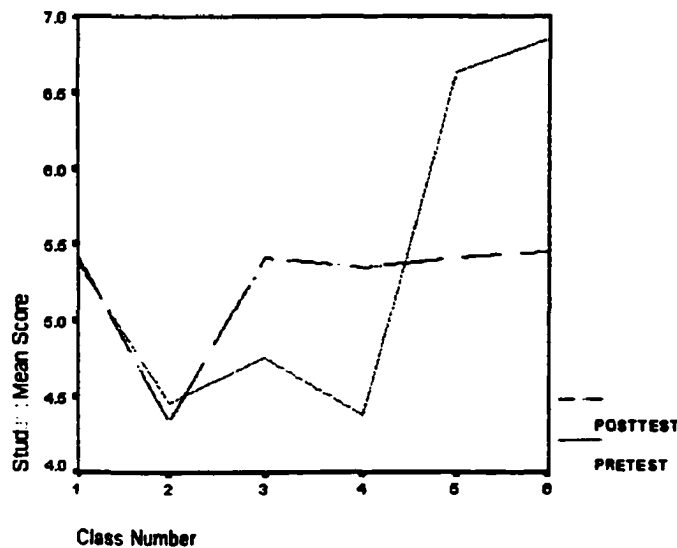
Graph 7: Ten treatment groups' mean pretest and posttest Moral Reasoning scale scores (Group I)



Graph 8: Eight comparison groups' mean pretest and posttest Moral Reasoning scale scores (Group I).



Graph 9: Eight treatment groups' mean pretest and posttest Moral Reasoning scale scores (Group II).



Graph 10: Six comparison groups' mean pretest and posttest Moral Reasoning scale scores (Group II).

All treatment classrooms in the study showed significant gains on the moral reasoning subscale. No gains were found on the moral reasoning subscale in the comparison classrooms. Therefore, hypothesis No. II was accepted.

Summary

The study was comprised of 18 classrooms, 12 in Bucks County and 6 in Philadelphia elementary schools. The study investigated the effects of conflict resolution training on metacognition and moral reasoning in 4th and 5th grade students. These groups were tested at the beginning and end of each school year. Differences on mean subscale scores were determined using a single tailed t-test with an alpha level of .05. Significant gains in metacognition and moral reasoning were found in all treatment classrooms. No significant changes were

found in comparison classrooms. A two tailed t-test with an alpha level of .05 was used to assess any differences in the treatment group and the comparison group mean pretest scores. Because significant pretest differences were found in the year three Bucks County groups, all data were reported with and without these group measures.

Chapter V

Summary, Conclusions and Recommendations

This chapter summarizes the purpose and design of the study, and provides findings and conclusions. The chapter concludes with recommendations for practitioners, and recommends further research on the relationships between conflict resolution, metacognition, and moral reasoning.

The purpose of this study was to determine whether conflict resolution skill development over the period of a school year of training has the effects of increasing students' use of metacognitive strategies and moral reasoning. This investigation followed a two-year pilot study, and was conducted over a three-year period in a low income elementary school in the Philadelphia School District and in two elementary schools in a low income suburban school district in lower Bucks County. Sample subjects were fourth and fifth grade students. Both school districts in the study demanded student anonymity, therefore each of the student samples (a total of 18 classrooms) were reported as group means. The pretest and posttest measures from all treatment classrooms and comparison

classrooms were pooled (10 treatment; eight comparison) and assessed for significant pretest to posttest differences on each of the three measures using a one tailed t-test with an alpha level of .05 (Group I). The same analysis was conducted with the eight treatment and six comparison classrooms that showed no significant pretest differences (Group II). In these school settings, treatment group teachers were trained in conflict resolution by experienced personnel from the Peace Center. Classrooms were monitored by the Peace Center personnel and by the researcher over the duration of the study to ensure classroom implementation of skills learned during training. The following hypotheses were examined:

Hypothesis I: Conflict resolution skill development will positively affect use of metacognitive strategies.

Hypothesis II: Conflict resolution skill development will positively affect student's moral reasoning.

Findings:

The Student Attitudes About Conflict (SAAC) was administered to treatment and comparison groups to confirm program implementation.

Differences between treatment and comparison groups on a one tailed t-test affirmed training effectiveness for the treatment groups at the alpha level of .05.

One tailed t-tests with an alpha level of .05 established that students whose teachers received conflict resolution training and who taught conflict resolution

skills in the treatment classrooms demonstrated significant improvement in both areas of investigation, metacognitive skills and in moral reasoning. Both research hypotheses were accepted.

Conclusions and Implications:

This study indicated that conflict resolution training brought about improved student attitudes about conflict and increased their knowledge base about conflict resolution. This finding corroborates the findings of others (Crawford & Bodine, 1996; Johnson & Johnson, 1996) which indicate improvement of student's attitudes and knowledge about conflict resolution as a result of conflict resolution training. Therefore, implementation of conflict resolution training in schools similar to those examined in this study is a worthwhile endeavor for increasing decision making and conflict resolution skills.

Furthermore, the metacognition scale employed in this study established that conflict resolution training had a positive effect on student metacognition. This question was inspired during the two years of pilot testing through examination of students' profiles on the Student Attitudes About Conflict, their questions and comments about conflict, and from listening to teachers' comments about their students and their curricula. Unfortunately, there is a paucity of research in this area. The finding of this study on the relationship between conflict resolution training and metacognition does, however, support the research in closely related areas in which students exercise metacognitive strategies. For

instance, numerous researchers (Stevahn, Johnson, Johnson & Real, 1996) demonstrated improved academic achievement after conflict resolution training. Similar positive results in problem solving strategies and in thinking strategies such as perspective taking and improved listening have been brought about as a result of conflict resolution training. Researchers (Davidson & Worsham, 1992) have found that increasing social co-cognition improves metacognitive awareness. Improving affect regulation has been found to improve academic performance, as well (Masten & Coatsworth, 1998). Some researchers suggest that social relationships and social interaction are fundamental to developing the skills of cognitive mediation and cognitive regulation (Brilliant, 1995). The research of Klaczynski, Gordon and Fauth (1997) indicates that evaluation of multiple perspectives increases metacognitive development by creating an awareness of one's own biases.

While not directly called metacognition or metacognitive strategies, gains in these areas suggest improved metacognition. Because this study established the effectiveness of conflict resolution training in improving metacognition, and because these findings corroborated research findings in areas related to metacognition, it is concluded that conflict resolution training should be undertaken in schools similar to those represented in the research population to enhance students' thinking abilities. It appears that students have internalized conflict resolution strategies after using them consistently over the duration of a

school year. During the pilot studies in Philadelphia the students and teachers who were interviewed mentioned that students now stop and think, indicating a cognitive shift that enables students to reflect on strategies before reacting in social settings. Having established the fact that students are more inclined to metacognitive reflection rather than reaction after conflict resolution training, the second question becomes, on what do they reflect. The moral reasoning scale was developed to ascertain whether students simply reflect on how the consequences of their reaction will affect them or if they take into consideration the perspectives of others during this period of reflection. The results of this study indicate that students, given cognitive tools, reflect on how their communication and behavior will affect those around them as well as themselves.

This study found conflict resolution training to have positive effects on students' moral reasoning. Similar to metacognition, the topic of moral reasoning has received little attention by conflict resolution researchers. Indices of moral reasoning are reflected in conflict resolution researchers' dependent variables such as verbal aggression, physical altercations, and behavioral referrals by teachers. Indeed, student behavior has been the paramount concern of conflict resolution researchers. Although not called moral reasoning, these criteria operationally represent what is defined by the researcher to be moral reasoning. Improvement in student behaviors which subsume moral reasoning have been posited by Crawford and Bodine (1996). This study, which found improved moral

reasoning of students who had conflict resolution training, seems to support the positive behaviors and prosocial changes derived from conflict resolution training by other researchers. The conflict positive classroom provides opportunities for students to reason and empathize, opportunities that are essential to moral development, according to Kohlberg (Kohlberg, Levin, and Hewer, 1983). Goldstein's (1998) extensive research indicates that role taking and reciprocal interaction are the essential elements to children's' moral development. Therefore, conflict resolution training may be legitimately supported as a means of improving students' moral reasoning.

Recommendations for Further Research:

The results of this study provide a compelling case for future research on metacognition instruction for urban at-risk elementary students. Meta-analysis (Wang, 1992) shows that metacognitive competency may be one of the most important differences between low achieving at-risk children and their more academically successful counterparts. Therefore, the following recommendations are made:

- 1) Because direct instruction in metacognition and moral reasoning is always a challenge, the exercise of conflict resolution curricula which address metacognition and moral reasoning in the social domain should be investigated.

- 2) Since the social domain is compelling to students, research comparing the social domain acquisition of metacognitive skills to direct instruction in metacognition is implied by this study.
- 3) Research on the relationships between conflict resolution training, metacognition, and moral reasoning should be conducted with rural populations.
- 4) Research on the relationships between conflict resolution training, metacognition, and moral reasoning should be conducted on students who represent different age ranges.
- 5) Exploration of the influences of different conflict resolution curricula on metacognition and moral reasoning is indicated.
- 6) Investigations of the influences of conflict resolution training on moral reasoning and metacognition should be undertaken using different measure of these variables.
- 7) The longitudinal effects of conflict resolution training on metacognition and moral reasoning should be investigated.
- 8) Exploration of metacognition and moral reasoning process transfer outside of the school environment should be undertaken.
- 9) Teacher commitment to program interventions and the consequent influences on students should be explored.

10) Factors which influence program contamination, and the extent to which the success of the program contributes to such contamination, should be explored.

Summary:

The magnitude and publicity of incidents of school violence has brought attention to how educators can counter this trend. Numerous conflict resolution curricula have been implemented over the last decade as a response to antisocial behavior in American schools. While a host of research affirms the values of conflict resolution and peer mediation programs in promoting prosocial student behavior, some critical areas have gone unquestioned.

Specifically, questions of how metacognition and moral reasoning are affected by conflict resolution curricula have been ignored. This study found fourth and fifth grade student increases in use of metacognitive and moral reasoning strategies as a result of placement in conflict positive classroom environments.

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Appendix A
Student Attitudes About Conflict

Subscales:

1. Most of the time I feel good about myself. (Self concept subscale)

Yes No

2. Other kids think I'm someone they can talk to.

Yes No

3. I like school and look forward to coming most days. (Attachment subscale)

Yes No

4. Asking someone questions helps to find out how they feel. (Self concept subscale)

Yes No

5. Most kids would like to have me as a friend. (Self concept subscale)

Yes No

6. I have a hard time resolving conflicts with other people. (Perception of social skills subscale)

Yes No

7. I like to see teachers get mad in class. (Conflict resolution subscale)

Yes No

8. If I saw my friends fighting I would try to get them to talk out the problem instead. (Conflict resolution scale)

Yes No

9. I get along really well with other people. (Self concept subscale)

Yes No

10. When people talk I have a hard time paying attention. (Perception of social skills subscale)

Yes No

11. I don't like school very much. (Attachment subscale)

Yes No

12. Sometimes a person doesn't have any choice but to fight. (Conflict resolution subscale)

Yes No

12. To help someone with a problem you have to know how they feel about it. (Self concept subscale)

Yes No

13. I want to do well in school. (Attachment subscale)

Yes No

15. When kids I'm with do something bad I usually go along with them. (Conflict resolution subscale)

Yes No

16. I think most people at school really like me. (Perception of social skills subscale)

Yes No

17. It's hard to talk to a teacher about my feelings.

Yes No

18. There is at least one thing I'm good at. (Self concept subscale)

Yes No

19. Other kids will think I'm afraid if I don't fight when someone makes me mad. (Perception of social skills subscale)

Yes No

20. My teachers really care about me.(Attachment subscale)

Yes No

21. If someone hits me I usually hit them back to get even. (Conflict resolution subscale)

Yes No

22. It's easy for me to explain things to other kids my age. (Social skills subscale)

Yes No

23. Fighting with someone can be a good way to solve a problem. (Conflict resolution subscale)

Yes No

24. I like to get involved in school activities. (Attachment subscale)

Yes No

25. I'm good at helping people solve their problems. (Self concept subscale)

Yes No

26. Other kids would think I'm weird if I tried to stop a fight. (Perception of social skills subscale)

Yes No

27. I like to help my teachers. (Attachment subscale)

Yes No

28. I work well with others. (Self concept subscale)

Yes No

29. Most people don't know what I'm really like. (Perceptions of social skills subscale)

Yes No

30. I try to talk out a problem instead of fighting. (Conflict resolution subscale)

Yes No

31. Teachers think I cause a lot of trouble. (Attachment subscale)

Yes No

32. I treat other people well. (Self concept subscale)

Yes No

Appendix B

Dispositions toward Moral Reasoning and Metacognition--D.M.R.M. (metacognition subscale)

1. I think before I act.

Yes No

2. I sometimes think twice about things.

Yes No

3. I listen carefully to someone even if I don't agree with them.

Yes No

4. I usually think about what is going to happen next when I do something.

Yes No

5. There are several steps in solving a problem.

Yes No

6. I make mistakes because I work too fast.

Yes

No

7. I try to understand how other people feel.

Yes

No

8. Sometimes I have to try a different plan to solve hard problems.

Yes

No

9. It's important to consider all sides of a problem.

Yes

No

10. I keep track of my progress when I'm solving a problem.

Yes

No

11. I try to understand problems before I solve them.

Yes

No

12. I make sure I understand something before I make up my mind about it.

Yes No

13. I check my thinking to make sure I understand all the facts.

Yes No

14. If I don't get something right I usually try again.

Yes No

15. I use different ways to solve different problems.

Yes No

16. I plan a lot when I solve hard problems.

Yes No

17. I think carefully before I make up my mind about things.

Yes No

18. When I don't understand something I ask for help.

Yes

No

19. It's important to consider all sides of a problem.

Yes

No

20. I make sure I understand something before I make up my mind about it.

Yes

No

Appendix C

Dispositions toward Moral Reasoning and Metacognition--D.M.R.M. (Moral Reasoning subscale)

1. I try to treat others as I would like them to treat me.

Yes No

2. I try to be fair with other people even if they are not friends of mine.

Yes No

3. I try to do the right thing even when I don't agree with my friends.

Yes No

4. I'm a fair person and people can always trust me.

Yes No

5. I am fair to people even when I don't agree with them.

Yes No

6. I value the opinions of others when solving problems.

Yes No

**7. I check to make sure I understand what someone is saying before I make up
my mind about things.**

Yes No

**8. I often go along with my friends even when I think what they are doing is
wrong.**

Yes No

9. It's not possible for both sides to win in a conflict.

Yes

No

10. I make sure I understand someone before I get angry at them.

Yes

No

Appendix D

Philadelphia Pilot Study

The two-year study, *Metacognition and Moral Reasoning in the Conflict Positive Classroom*, was preceded by a two-year pilot study. During this time, fourth and fifth grade treatment group students were asked to list how they had changed as a result of their placement in a conflict positive classroom. This question was posed in addition to the SAAC (Students Attitudes About Conflict) during posttesting in pilot year two. Eighty eight students responded to the question. The sample was comprised of 57 students in two fourth grade classrooms and 28 fifth grade students. Seventy five of the students responded to the question with some version of the "Now I stop and think" answer.

The responses included listing anger management strategies such as I wait, cool off, stop and think, take time out, walk, take a deep breath, followed by a statement about their problem solving such as, Until I can think, listen, talk it out, or figure it out. Responses were only considered to fit into this category if the students listed an interim activity followed by the problem solving steps. When students listed eating, walking, and other activities as their sole response to anger, the response was categorized as an avoidance behavior rather than a conflict resolution response.

Appendix E

Treatment and Comparison Group Sample Sizes

Philadelphia Treatment Group I-A	Pretest = 33	Posttest = 26
Philadelphia Treatment Group I-B	Pretest = 31	Posttest = 26
Philadelphia Treatment Group II-A	Pretest = 32	Posttest = 26
Philadelphia Treatment Group II-B	Pretest = 30	Posttest = 24
Bucks Co. Treatment Group I-A	Pretest = 26	Posttest = 25
Bucks Co. Treatment Group I-B	Pretest = 22	Posttest = 21
Bucks Co. Treatment Group II-A	Pretest = 27	Posttest = 22
Bucks Co. Treatment Group II-B	Pretest = 28	Posttest = 28
Bucks Co. Treatment Group III-A*	Pretest = 30*	Posttest = 24*
Bucks Co. Treatment Group III-B*	Pretest = 27*	Posttest = 20*
Phila. Comparison Group 1-A	Pretest = 34	Posttest = 26
Phila. Comparison Group 1I-A	Pretest = 28	Posttest = 21
Bucks Co. Comparison Group 1-A	Pretest = 24	Posttest = 19
Bucks Co. Comparison Group 1-B	Pretest = 24	Posttest = 20
Bucks Co. Comparison Group 1I-A	Pretest = 30	Posttest = 24

Bucks Co. Comparison Group 1I-B Pretest = 27 Posttest = 20

Bucks Co. Comparison Group 1II-A Pretest = 30* Posttest = 25*

Bucks Co. Comparison Group 1II-B Pretest = 28* Posttest = 22*

***Samples not used in Group II analyses due to significant pretest differences.**

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Heydenberk, Warren R. & Roberta Heydenberk, *When I Get Angry*, Erica House
Publishers, 2001. A picture book for children

Heydenberk, Warren R. & Roberta Heydenberk, *A Powerful Peace: The Integrative
Thinking Classroom*, Allyn and Bacon, 2000, Needham Heights, MA.

CONFERENCES ADDRESSED

36th Annual Bloomsburg University Reading Conference, 2000, Safer and Smarter
Schools: Strategies For The Integrative Thinking Classroom, presented with Warren
Heydenberk, Bloomsburg, PA.
Philadelphia Yearly Meeting, 2000, School Conflict Resolution Programs--How Are We
Doing? presented with Warren Heydenberk, Phila., PA.
St. Joseph University Conflict Resolution Conference, 2000, Creating Conflict Positive
Classrooms, presented with Warren Heydenberk, Phila., PA.
Muhlenberg College of Professional Development School, 1999, *Conflict Resolution in
the Classroom*, presented with Warren R. Heydenberk, Allentown, PA.
Keystone State Reading Association Conference, 1999, *A Powerful Peace: The*

Integrative Thinking Classroom, presented with Warren R. Heydenberk.
 Harvard School of Public Health Prevention Institute, Inc. Telecommunications
 Conference, 1999, *Building Bridges: Strengthening Schools and Communities*,
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Susquehanna Valley Reading Association, 1999, *Student Conflict and Critical Thinking
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 Critical Thinking in the Classroom*, presented with Warren R. Heydenberk,
 Bloomsburg, PA.

PA. State House of Representatives Subcommittee on Violence in Schools, 1998,
 Testified to the Committee about creating conflict positive schools, with Warren
 R. Heydenberk, Jefferson Hospital, Phila., PA.

13th Annual National Institute for Dispute Resolution Conference, 1998, *Project Peace
 and School Culture: Building Bridges From the Classroom Out*, with Warren R.
 Heydenberk, Columbus, Ohio,

34th Annual Bloomsburg University Reading Conference, 1998, *Critical Thinking in the
 Conflict Positive Classroom*, with Warren R. Heydenberk, Bloomsburg
 University, Bloomsburg, PA.

Bucks County Community College Drug and Alcohol Conference, 1998, *Conflict
 Positive Classrooms*, with Warren R. Heydenberk, Newtown, PA.

Friends of Bucks County Peace Centers, 1997, *Conflict Resolution in American Schools*,
 with Warren R. Heydenberk, Newtown, PA.

United Nations World Peace Organization, Peace Education Conference, 1997, *Conflict
 Positive Classrooms in At-Risk Schools*, with Warren R. Heydenberk, U.N. Plaza,
 New York, N.Y.

Right to Hope Conference, 1997, *Creating Conflict Positive Classrooms*, with Warren R.
 Heydenberk, Bucks County Community College, Newtown, PA.

Pa. State Education Association 23rd Annual Leadership Conference, 1997, *Classroom
 and Community Collaboration*, with Warren R. Heydenberk, Gettysburg College,
 Gettysburg, PA.

National Conference on Peacemaking and Conflict Resolution, Annual Conference, 1997,
Conflict Resolution Program Design and Evaluation, with Warren R.
 Heydenberk, Duquesne University, Pittsburgh, PA.

33rd Annual Bloomsburg University Reading Conference, 1997, *Creating Metacognitive
 Listeners*, with Warren R. Heydenberk. Bloomsburg University, Bloomsburg, PA.

RECENT AWARDS

1st Place Writers' Choice Poetry Award 2001, "Storyteller", a journal for writers.
 Honorable Mention, PA Poetry Society, 2001
 3rd Place, People's Choice Poetry Award, Sept 2001
 The Peace Center Annual Peace Maker Award, 2001
 Citation, PA State Poetry Society, 2002

SERVICE TO COMMUNITY

Member, S.T.A.R. Academy Advisory Board, Lehigh University--a tutorial program in which Lehigh University students tutor approximately 100 at-risk middle and high school students in the Lehigh Valley

Member , Conflict Resolution Concerns Committee of the American Friends Service Committee, International in scope, the American Friends Service Committee is the social service branch of the Religious Society of Friends, Phila., PA. (1999-2000)

Member, Peace Center Institutional Review Board. (1996-1999)

Member, Advisory Panel of Peace Education Project of the United Nations, World Peace Project, (1997)

Continued service to area School districts in conflict resolution education and communications through the auspices of the Peace Centers, Langhorne and Doylestown, PA.

Member, Richland Friends Outreach Committee, (1997-present)

Member, Friends of the Michener Libraries, Bucks Co., Active in designing educational programs and soliciting funding. (1998)
Bethlehem, PA.

New Hope/Lambertville Gallery Association and Pennsylvania Art Council, New Hope, PA., Fund raiser/Auction Assistant: assistant in public relations, assist in auction fund raiser

New Hope Historical Independence Day Committee, New Hope, PA., Children's Activity Coordinator: develop and design children's activities, assist in public relations, organize volunteers and sponsors for children's events (1991)

Good Samaritans' Suicide Prevention Group, Providence, Rhode Island Fund raising, telethon volunteer (1985)

St. Nicholas Society, New Hope, PA., Holiday volunteer: organize and wrap gifts for mentally handicapped senior citizen residents of the New Jersey facility/home, distribute gifts, assist in residence holiday celebration. (1985)