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ABSTRACT
                A study was done to evaluate the social validity of
the interventions of conflict resolution and cooperative learning at
three campuses of an alternative inner-city high school in New York
City. The evaluation explored students' and teachers' perceptions of
the effectiveness and applicability of the interventions in their
lives. Extensive interviews were conducted, and questionnaire data
were collected for 36 of 48 teachers and for 177 students on the
Intervention Report Survey and 204 students on the Interpersonal
Improvement Questionnaire. The student population was primarily Black
and Hispanic American from economically disadvantaged backgrounds. In
addition, teachers gave feedback on the training they received for
doing cooperative learning and conflict resolution lessons with their
students. Students found the interventions to be useful and
experienced interpersonal improvements in their lives. The teachers
gave moderate endorsement of the interventions and considered
cooperative learning to be useful for their students' academic
learning and social and psychological development. Teachers judged
conflict resolution to be moderately valuable for the students'
development and quite useful in the students' everyday lives.
Overall, the results indicate that cooperative learning and conflict
resolution programs were useful and valid. Included are 30 tables; 11
figures; 4 appendixes containing reliability information, teacher
data, student data, and descriptions of the instruments in 7 tables;
student questionnaires on conflict resolution and on cooperative
learning; and 48 references. (JB)

AN ASSESSMENT OF THE SOCIAL VALIDITY

OF

COOPERATIVE LEARNING AND CONFLICT RESOLUTION PROGRAMS

IN AN

ALTERNATIVE INNER CITY HIGH SCHOOL

BY

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SUMMARY

This report evaluates the social validity of the
interventions of conflict resolution and cooperative
learning at three campuses of an alternative inner city high
school (Alternative High School [AHS]). The evaluation is
directed at exploring the students' and teachers'
perceptions of the effectiveness and applicability of these
interventions in their lives. The intervertions were
introduced into AHS by The International Center for
Cooperation and Conflict Resolution (ICCCR) at Teachers
College, Columbia University, directed by Morton Deutsch.

Extensive interview and questionnaire data were
collected from the teachers and the students on their
assessments of the interventions. In addition, the teachers
gave ICCCR feedback on the training they received for doing
cooperative learning and conflict resolution lessons with
their students.

The students found the interventions to be useful and
felt interpersonal improvement in their lives. The teachers
gave moderate endorsements of these interventions. Teachers
considered cooperative learning to be useful for their
students' academic learning and social and psychological
development. They judged conflict resolution to be
moderately valuable for their students' psychological and
erotional development, and quite useful in the students'
everyday lives such as at work, with their families, and at

school. Further, they mentioned desiring more training in both these interventions and had suggestions for tailoring the training to better fit their needs.

The findings indicate that cooperative learning and conflict resolution programs are useful and valid within AHS. Limitations of this report are discussed and general future directions, such as needs assessment and program implementation monitoring, are suggested for further social validity studies.

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Introduction

Researchers have argued that consumer satisfaction is likely to be an important factor in the effectiveness of the outcome of an intervention and plays a critical role in evaluating the overall worth of the program (e.g. Lebow, 1982; McMahon & Forehand, 1983; Rossi & Wright, 1984; Wolf, 1984). If the participants do not like the program goals, procedures, or outcomes, they will be less likely to use that program or social technology, regardless of how potentially effective and efficient it might be (Wolf, 1978).

Consumer satisfaction with social programs can be considered to be a social validation of those programs. Social validity is concerned with three aspects of social interventions: (1) Are the goals of a particular social program important to the consumers? (2) Are its consumers satisfied with the procedures of that social program? (3) Are its consumers satisfied with the outcomes of that social program, including the unintended outcomes? (McMahon & Forehand, 1983).

This paper assesses the social validity of the cooperative learning and conflict resolution programs introduced into an alternative inner-city high school (Alternative High School [AHS]) in a three year study entitled "The Effects of Cooperative Learning and Conflict Resolution in an Alternative High School" (Deutsch, 1991).

The training and the research components the program were based on the theoretical work of Morton Deutsch (1949a, 1973, 1985). Based on Deutsch's theory of competition and cooperation, several effects of the interventions were hypothesized for the students. Among these hypothesized effects were: the students would demonstrate greater psychological well-being; they would experience a decrease in destructive conflict; and they would improve in their school achievement. In addition, teachers would develop skills in constructive conflict resolution and feel improvement in student-teacher relationships. Further, it was hypothesized that cooperative learning would be difficult to institutionalize unless accompanied by, or preceded by, conflict resolution training.

Although all three aspects of social validity are addressed, the evaluation emphasis is on the third aspect, namely, satisfaction with the outcomes. Specifically, this paper is a systematic exploration of teachers' perceptions of the effectiveness of cooperative learning and conflict resolution skills for their students and themselves. Teachers are in a special position to evaluate the effects of new educational programs on their students and also to know why these innovations or programs work or don't work. In addition, this paper investigates whether the students at AHS rated these interventions as beneficial and felt improvement in areas the interventions were hypothesized to affect. The students were also consumers of these programs

and were, like the teachers, in a position to evaluate the effects of the programs on themselves in ways that the researchers may have otherwise failed to measure or evaluate. Since these were interventions which taught social skills, we were interested in knowing whether students felt that they had improved, in general, in their interpersonal relations. We were also interested in knowing whether the students exposed to cooperative learning techniques felt they learned more in a cooperative learning group than in their usual mode.

These social validity data are important for two related reasons: firstly, to ascertain whether the intervention programs were perceived to have beneficial effects by an inner city minority student population and their teachers; and secondly, to indicate directions for better tailoring the programs for future implementation. A social validity finding such as the one reported in this paper will help to identify what works, what doesn't work, and why.

The remainder of this paper will be divided into the following sections: (1) a review of studies on consumer satisfaction with cooperative learning and conflict resolution; (2) a brief description of the interventions; (3) a description of the methods for exploring social validity used in this paper; (4) presentation of the findings; and (5) discussion.

Review of Literature

Though there is some interest in the social validity of cooperative learning and conflict resolution programs in schools, the extant literature on consumer satisfaction with cooperative learning and conflict resolution is limited. Only general, anecdotal satisfaction tends to get reported. Following is a review of studies which address the social validity of conflict resolution and cooperative learning programs.

Conflict resolution (CR)

Generally, very few studies have assessed school based conflict resolution programs in a systematic fashion (Van Slyck & Stern, in press; Wilson-Brewer et al., 1991; Lam, 1989). The few studies which have explored the impact of conflict resolution training indicate that, in general, the participants are satisfied with the training and find it useful. Most conflict resolution interventions were introduced into che schools because there was a felt need for them and interest in these programs was generated by hearing about others' successes with these kinds of programs (Lam, 1989).

Educators wanted conflict resolution and/or dispute mediation programs in the schools for several reasons. The reason most frequently given has been the increase in violence between students and teachers and among students. Such violence ultimately affects the quality of education in schools. In addition, gang competition and drug trafficking

through the schools sharply increase the chances of serious
violence and weapon use in schools (Coulter, 1990).
Homicide is the second leading cause of death among young
people ages 15-24; for young black men, homicide is the
leading cause of death (Centers for Disease Control, 1990).
Emotional trauma and psychological damage due to violence or
the potential for violence are much more difficult to
quantify (Wilson-Brewer et al., 1991).

Among a number of possible solutions to the problem of
violence in schools suggested by The National School Safety
Center, prevention was considered the key solution (in
Coulter, 1990). Violence prevention education would entail
teaching students skills in empathy, impulse control, and
anger management from an early age (Coulter, 1990).
Training in conflict resolution and mediation are viewed as
valid ways of teaching such skills. Training in conflict
resolution skills is also considered a method of empowerment
for disadvantaged youth who, after training, can begin to
ask for their needs to be fulfilled in non-violent ways
(Freed, 1990). Promotion of peaceful solutions to conflicts
and enhancement of social skills are among the goals of
these conflict resolution/mediation programs (Van Slyck &
Stern, in press; Wilson-Brewer & Jacklin, 1990)

There are over 35 college and university campuses which
now have mediation programs (Warter, 1991). Many more
elementary, middle, and high schools report training in
conflict resolution and mediation in The Fourth R, the

newsletter of the National Association for Mediation in Education (N.A.M.E.). Rationales and evaluation summaries of some of these programs are given in Wilson-Brewer and Jacklin (1990) Wilson-Brewer et al., (1991), and Lam (1989). Following the conflict resolution and mediation movement initiated in the United States, some schools in Canada are similarly incorporating conflict resolution skills training into their curricula (Storie, 1989).

If popularity is an indicator of social validity, there is ample evidence to show that the goals of conflict resolution and mediation training are considered socially valid by many educators. Several feature articles report the beneficial aspects of these programs as ascertained by both subjective and objective measures (see Freed, 1990; DelMaestro, 1989; Kohn, 1990 as examples). Systematic evaluations have shown positive changes in school climate and students' attitudes towards conflict as a result of conflict resolution training. Student attitudes toward and thinking about conflict situations are more constructive and they acquire conflict resolution skills after training. In addition, teachers' feel that the likelihood of fighting among the students is reduced (Wilson-Brewer et al., 1991; Lam, 1989). Evaluations of student mediation programs further show that the student disputants have been satisfied with the mediation outcomes (Lam, 1989). Additionally, studies on peer mediators show that their self-image is enhanced (Lam, 1989; VanSlyck & Stern, in press). A profile

of a student mediator showed that not only did she feel that her relationships became better, but also her grades became better (Araki, 1990)

Other practitioners, trainers, and teachers, note similar effects of conflict resolution training on their students. For example, Schultz (1990) reports more school success for the 65 academically and socially at-risk students who underwent 6 week intensive conflict resolution training. In general, Schultz (1990) reports being happy with the commitment made by the Ann Arbor Public schools to institutionalizing conflict management programs.

Keeney (1989) reports that the principals and the teachers of the schools involved in the "New Mexico Mediation in the Schools" program have had a positive reaction to the program. They feel that the school atmosphere and student interpersonal relations have improved now that there is a constructive and legitimate channel for dealing with conflicts. One good indicator of program acceptance in the school is that about 60% of the upper elementary students wanted to be trained to become mediators. No negative effects of the program are noted (Keeney, 1989).

Clark and Mann (1989) report that the five year old mediation program at Poughkeepsie Middle school was successful in improving attendance, building self-esteem, and creating a sense of responsibility within the student body.

Positive effects of conflict resolution/mediation training have also been noted by the parents. Parents of student conflict managers in the "New Mexico Mediation in the Schools" program have reported being pleased with their children's involvement and have reported carry-over of skills learned (Keeney, 1989). In one district, parental training has been carried out at the request of the parents. Keeney (1989) feels that "it is often the changes which parents see at home which arouse their interest" (p. 3). These reports are encouraging as they point to the beneficial aspects of conflict resolution training in areas outside of the school.

Parents of the students have benefitted from conflict resolution programs in other ways as well. In one study, the parents involved in disputes with the school were considerably mor satisfied with conflict mediation after the school personnel had been trained in conflict resolution skills than they were prior to that training. The post-training ratings made by independent observers on the performance of the participants were also higher (Maher, 1986). In addition, the observers commented that such a program would be beneficial for themselves (Maher, 1986).

Thus, many reports note the enthusiasm of the parties involved with school mediation/conflict resolution training programs. Several researchers and practitioners, however, point out the caveat involved in uncritically lauding mediation/conflict resolution programs. Although the idea

of mediation/conflict resolution is being sold to schools
extensively, there haven't been many intensive efforts to
evaluate what is working and what isn't, which might in fact
limit the potential of such programs (Van Slyck & Stern, in
press; Cohen, 1989; Lam, 1989). There is a need for much
more systematic assessments of these programs after
implementation, using rigorous data collection and analysis
procedures.

Cooperative Learning (CL)

Much more research has been done in the area of
cooperative learning than conflict resolution. Social
skills, academic performance, school climate, etc. have been
studied by many researchers and, overall, the results have
been positive (Johnson & Johnson, 1989; Slavin, 1980).
Cooperative learning classrooms were found to be superior to
individualistic and competitive classrooms in promoting
individual achievement, positive social relationships, and
higher self-esteem (Johnson & Johnson, 1989).

Some studies have reported students' reactions to the
CL format. Student interviews from the five year Child
Development Project (CDP) showed that the children felt they
gained academic and social benefits from cooperative
learning (Solomon et al., 1991). The academic benefits they
saw were getting the work accomplished, getting help from
peers, and learning. The social benefits they saw were
learning how to work in groups, learning to be cooperative,
and learning to understand and appreciate others (Solomon et

al., 1991). In another study, a pre-post analysis showed that students reported cohesiveness in their groups and satisfaction with cooperative learning (Lazarowitz, 1991).

Teacher attitudes towards and satisfaction with cooperative learning have also been widely reported. Several feature articles have described teachers' experiences with cooperative learning as being positive for themselves and their students (e.g. Graves & Graves, 1991; Clarke, 1990). Teachers have found training in the Jigsaw strategy of cooperative learning interesting and useful (Moskowitz et al., 1985). Reports of several in-service training programs also provide anecdotal or qualitative data that show that both students' and teachers' reactions towards cooperative learning were positive (e.g. Lazarowitz, 1991; McElroy, 1989; Reynolds & Salend, 1989; Ellis, 1985). Some of the reasons teachers cited for liking cooperative learning were that they could draw from the expertise of others and their ability to communicate with other professionals increased (Reynolds & Salend, 1989).

Teachers have also noted problems with the cooperative learning format. Some of the problems the teachers mentioned were student objections to assigned tasks, peer problems among students (McElroy, 1989), and fatigue doing cooperative learning (Lazarowitz, 1991).

Thus, it appears that, in general, cooperative learning has been well received by teachers. However, despite these reports, there is a dearth of systematic research on

teachers' evaluations and perceptions of the effects of
cooperative learning on their students after it has been
implemented in a particular setting. In addition, problems
with use of CL, student objections to the format, and any
other difficulties that might arise need to be addressed
each time it is implemented in a particular setting. It is
also important to assess student satisfaction with the
cooperative learning instructional approach as they are in a
position to estimate its effects on themselves on the
subjective social and learning dimensions. These
satisfaction data are necessary in order to evaluate the
applicability of cooperative learning with different
populations.

The present paper reports such an evaluation for an
inner city alternative high school minority population. The
training programs, methods of data collection and analysis,
and findings are described below.

Interventions

The programs of cooperative learning and conflict
resolution were introduced into Alternative High School
(AHS) by the International Center for Cooperation and
Conflict Resolution (ICCCR) at Teachers College, Columbia
University. ICCCR approached AHS for a joint research-
training project in cooperative learning and conflict
resolution for a period of three years. The project was
accepted by AHS, as training in cooperative learning and
conflict resolution was thought to satisfy some of the needs

of the high school. There was a need at AHS, especially for

the teachers, for programs that would help faculty and

students deal with problems that often resulted in fighting

among the students. (personal communication, Coordinator of

AHS). Conflict Resolution training was viewed as a program

that would help meet that need. Cooperative learning was

considered desirable for reorganizing the school, to help

with integration of subject matter, and for enhancing

student learning (personal communication, Coordinator of

AHS).

The cooperative learning and conflict resolution

training programs were carried out at three of the four

campuses comprising AHS. Campus A received training in

conflict resolution (CR), Campus B in conflict resolution

during the first year and cooperative learning (CL) with

elements of conflict resolution during the second year, and

Campus C in cooperative learning (CL). The project training

took place over the course of two years instead of the three

years that were planned because of the three years that were

planned because of an inability to obtain funding for the

third year.

Qualitative data on the intervention implementation

show that the implementation of the CR training at Campus B

and CL training at Campus C suffered from a rocky start

during Year One and many of the teachers were not receptive

to these trainings. At Campus C, the training in CL did not

begin until January of 1989. The training implementation at

Campus B had turned from conflict resolution to cooperative learning during Year Two, and the implementation of this training was smoother. At Campus C, the training was being implemented more carefully during Year Two, and more teachers were participating in the training. However, the Campus C trainer became ill in April 1990 and could not continue the training sessions. At Campus A (CR), these problems were circumvented by the trainer adopting a model of training more acceptable to the teachers and doing more rapport building; hence the training was received well during Year One and was even more accepted during Year Two. It is important to note, however, that the teachers at Campus A frequently utilized the trainer to do direct student training in conflict resolution skills in their classrooms rather than employing these skills themselves. (Please see Mitchell, 1991 for a detailed description of the training and AHS.)

Several questions were formulated to guide the analysis of the data collected from the teachers and from the students to examine the consumer satisfaction with, or social validity of, the cooperative learning and conflict resolution interventions introduced into AHS.

Questions related to the teachers

1. As an indirect measure of satisfaction with the training, do the teachers use CL/CR techniques in their classes once they have received training in one or both?

2. Do the teachers participating in training and actively using CL positively evaluate the effects of CL on their students regarding:

    a. academic achievement?

    b. psychological improvement?

    c. peer relationships?

3. Do the teachers participating in training and actively using CR positively evaluate the effects of CR regarding:

    a. socio-emotional influence on students?

    b. applicability of CR in and outside of school?

    c. teachers' relationships with students and others?

    d. teachers' ability to handle student discipline?

4. Are there any differences on the evaluation of the effects of CL/CR between the teachers who participated in training and actively used CL/CR and the other teachers?

For analysis purposes, the teachers were divided into two groups: those who received training in CL and CR and used the interventions, and all other teachers including those who chose not to undergo training and those who did participate in the training but did not implement it. This grouping was made based on the rationale that teachers who had training in an intervention and implemented that intervention would have a better understanding of its effects on their students than the other teachers. In

addition, they would be able to give a better assessment of the problems associated with use of that particular intervention. The other teachers were asked to rate the interventions on how effective they thought the interventions might be for their students. Thus, the differences of perceptions of the effects of the intervention were explored between teachers who trained in and implemented the interventions and all other teachers.

5. What did the teachers find useful/not useful about the CL/CR training and what suggestions did they have for improving the training programs?

6. Lastly, what are the associations between training hours, teachers' expertise as ranked by the campus coordinators and campus trainers, and teachers' use of CL/CR?

Questions Related to the Students

Interview data, Year One.

1. Do the students report use of CL techniques (Campus C) and CR techniques (Campuses A and B) in their classes?

2. For CR at Campuses A and B:

    a. Do the students find the lessons useful in the following places: home, school, work, street?

    b. What do the students like and dislike about the lessons?

    c. What suggestions do the students have to make the lessons more useful to the students?

3. For CL at Campus C:

a. what do the students like and dislike about one
particular cooperative learning class?

b. what skills do the students learn to do that make
them work better in groups?

Questionnaire data, Year Two.

1a. Do the students report use of CL techniques (Campuses B
& C) and CR techniques (Campus A) in their classes?

1b. Do the students find CL/CR techniques useful?

2. Do the students at Campuses B & C:

a. Like cooperative learning?

b. Feel cooperative learning helps them learn
more?

3. Do the students at Campus A report use of CR skills in
conflict situations?

4. As an indirect measure of social validity, do the
students report improvement in:

a. effective social interaction/groupwork?

b. effective handling of conflicts?

c. lessening of physical fights?

5. Finally, can self-rated improvement be predicted from
perceived usefulness of the training and an
independently calculated exposure to the interventions?

Method

Sample

Teachers. Questionnaires regarding satisfaction with
program effectiveness were given to all the teachers at the
three campuses of AHS at the end of Year Two. The return

rate of the questionnaires is shown in Figure 1. The overall rate of return was 75%, with 36 of the 48 teachers returning the questionnaires at the end of Year Two.

The data from the trainers show that the teachers who did not return the questionnaires from Campus A were the ones who had not participated in the training. However, at Campus B, there was no discernible pattern of non-returns of questionnaires. Both participants and non-participants did not return the questionnaires. At Campus C, all the non-returns had some training, however it is unclear how much they were using it in classes. Two teachers who did not return the questionnaires were ranked fairly high with regard to their expertise with CL by the trainer.

The characteristics of the teacher sample at Year 2 at AHS are shown in Figures 2 thru 5. The ethnic data show that teachers are primarily white (81%) (Figure 2) but the gender distribution is about even (Figure 3). The teachers' educational background is shown in Figure 4; a majority of them have graduate degrees. The teachers' experience at AHS is shown in Figure 5; most have taught there from 1 to 5 years, with many of them having taught there between 5 and 10 years.

Students. At the end of Year 1, thirty four students were randomly picked from each of Campuses A and B, and 38 students were randomly picked from Campus C to be interviewed about the interventions at their campus. At the end of Year 2, questionnaires regarding the intervention and

self-rating of improvement were administered to all the
students taking the posttest surveys. One hundred and
seventy-seven completed the Intervention Report Survey and
204 completed the Interpersonal Improvement Questionnaire.
This discrepancy in number is due to non-completion of the
Intervention Report Survey and screening out of unreliable
data. The age of the students is between 16 and 20 years.
The population of students at AHS is primarily Black and
Hispanic: 45% Black and 50% Hispanic and 5% Other (Asian and
White). AHS has approximately 47% Males and 53% Females.

Chi-squares done by campuses show no differences
between campuses in the gender distribution of the student
sample. However, there is a statistically significant
difference in the ethnic distribution of the student sample
by campus. The Campus A sample has 50% Black and 50%
Hispanic students; the Campus B sample has 36% Black and 64%
Hispanic students; and the Campus C sample has 64% Black and
36% Hispanic students (Chi-square=9.38, $p<.01$).

Most of the students come from an economically
disadvantaged background. According to the Campus
coordinators, most students see AHS as the last chance of
getting a high school education (personal communication,
Coordinator, Campus A).

Measures

Teachers. Measures on the use and effects of the
interventions consist of questions pertaining to training in
and use of CL/CR. Questions are also asked about the

frequency of use of CL/CR techniques. Questions pertaining to the effects of and problems with CL/CR are answered on 5-point likert-type items. The final factor scales were derived by doing a factor analysis on all the variables of interest for data reduction purposes. The reliabilities of these scales are presented in Appendix A. The Cronbach Alpha for all the scales used are within the acceptable range with the possible exception of "lack of skill/support" for CL, for which it is .579. Some individual items were considered important and kept for analysis purposes without integrating them into the factor scales. In addition, teachers were asked for free responses to questions regarding how useful/not useful the training was for them and whether they had any suggestions for improving the training programs. These questions are presented with the data in Tables 8 to 10. Scales are in Appendix B.

In addition to the measures the teachers filled out, the trainers and coordinators at each campus were asked to rank the teachers according to their facility and expertise with the intervention introduced at their respective campuses (Appendix C). A log of training hours was also kept by the trainer for each teacher she trained.

Students. At the end of the first year of the interventions, interview data were collected from a random sample of students at each site. The interview format was in the form of questions which elicited free responses from the students. Questions related to liking the interventions

and assessing their usefulness were considered. These
questions are presented with the data in Tables 14 to 21

At the end of the second year, students' reactions to
the interventions were assessed through a series of yes/no
questions about the use of CL/CR techniques in classes and
whether these techniques were useful to them. In addition,
the students answered questions about liking CL and learning
in CL classes on 5-point likert-type items. For CR,
students answered questions about frequency of use of CR
techniques in specific situations on 5-point likert-type
items. The above items formed the Intervention Survey. On
the Interpersonal Improvement Questionnaire, students
answered questions about improvement in different social
interaction skills and emotional aspects of their lives on
five-point likert-type items. Factor analysis was done for
data reduction and for forming internally consistent scales.
The reliabilities are given in Appendix A. All are within
the acceptable range. Scales are in Appendix D.

Independent exposure to the training measures were
computed for the students at Campuses B and C based upon two
sources of information: 1) the teachers' reports of
percentage of class time used doing CL in the teacher
questionnaire; and 2) the students' exposure to that teacher
based upon his/her class schedule. An independent exposure
measure was created for the students at Campus A based upon:
(1) the trainers' reports of in-class time with the

students; and (2) the students' exposure to the trainer based upon his/her class schedule.

Results

Teachers

Cooperative learning. Overall, 22 teachers reported being trained in and using cooperative learning and 3 reported being trained in but not using CL. As Table 1 shows, of those who were trained in and used CL, 10 were from Campus C, 9 from Campus B, and 3 from Campus A. The 3 teachers from Campus A who had training in CL also had training in and used CR. The teachers from Campus A were not trained in CL through this project. Eight teachers reported not being trained in CL but using CL, and two reported no training and no use of CL. Teacher reports of use of CL techniques in their classrooms in an average month are shown in Figure 6 (Campus C) and Figure 7 (Campus B).

The teachers who actively participated in and used CL in their classes rated CL as being "somewhat effective" or better for their students in psychological, peer-relations, and academic spheres (see Table 2). Ratings were made on CL effects on students' psychological improvement such as increasing student responsibility and self-esteem, and developing student confidence and perspective-taking skills. In the peer-relations sphere, the teachers rated the effects of CL on promoting peer relationships, positive social interaction, and increasing class participation of their students (see Appendix B, Table 1 for scales). Finally, the

teachers rated the effects of CL on increasing student academic performance. The ratings for all three spheres were above the mid-point of the scale and the 95% confidence intervals for the means on these variables are also above the mid-point of the scale, which is "somewhat effective" (see Table 2). The effects on peer relations were rated the highest. In contrast, although the means for student psychological improvement and peer relations are above the mid-point of the scale for the second group of teachers, the mean for increasing academic performance is below the mid-point (see Table 2). In addition, the 95% intervals indicate that CL is considered "somewhat effective" or better only for promoting positive peer relations.

The difference between the two groups of teachers is significant for CL increasing academic performance $(t(32)=1.66, \underline{p}=.013)$ but not for other effects of CL.

Teachers were also asked to evaluate CL on some common problems associated with it (see Table 3). Of the 22 teachers, eleven teachers rated CL as NOT being problematic with regard to students not learning as much and good students being held back. Ten teachers rated CL as being somewhat of a problem for student learning, and 1 teacher rated it as being a definite problem. In addition, teachers also rated their own problems associated with their lack of skill and lack of support in doing CL such as their spending too much time on lesson preparation, their not feeling skillful enough, and their students not liking CL. Ten

teachers rated lack of skill/support for CL as not being a problem, 12 rated it as being somewhat of a problem (see Table 3). The three teachers who trained in CL but did not use it in their classes rated CL as being somewhat of a problem to learning and lack of skill/support for CL as also being somewhat of a problem for them. One teacher indicated that his/her lack of skill was a definite problem in doing the CL format. Thus, lack of support/skill and the perception that CL is non-conducive to learning appears to be associated with non-use of the training. No significant gender differences were observed in any of the above findings.

Conflict resolution. Overall, 13 teachers reported being trained in and using CR, 8 from Campus A and 5 from Campus B (see Table 1). Two other teachers who were trained in CR at Campus B did not use it, and another 2 reported no training but use of CR. It is interesting to note that all teachers at Campus B who had training in CR were also trained in CL. Teachers' use of CR techniques in their classrooms in an average month is shown in Figure 8-A (Campus A) and Figure 8-B (Campus B).

The teachers were asked to rate the effects of CR on two different areas for their students: (1) its usefulness and applicability in the students' everyday lives and (2) its socio-emotional influence (see Appendix B, Table 2 for scales). Those teachers who had CR training and used it in their classes rated overall conflict resolution

applicability and usefulness for their students as being more than "moderately valuable," the mid-point of the scale (see Table 4). An item by item analysis shows that CR is considered "quite valuable" in School and in family group, close to "quite valuable" at work and in student disciplinary committees, and close to "moderately valuable" in the neighborhood around school.

The teachers rated the influence of CR on socio-emotional areas such as developing student confidence, emotional maturity, perspective-taking skills, promoting peer relationships, and decreasing violence and hostility. The teachers who were trained in and actively used CR in their classes rated CR positive socio-emotional influence on their students as "somewhat effective," close to the mid-point of the scale (see Table 4). All the other teachers rated CR below "somewhat effective" for having positive socio-emotional influence on their students.

Teachers also rated the value and applicability of CR in their own lives and in handling student discipline. Teachers were asked to rate the personal value they had received from CR in areas such as personal relationships in general, relationships with colleagues, and teaching classes. The teachers who had received training and used CR rated the personal value of CR and handling of student discipline above "moderately valuable," the mid-point of the scale (see Table 4).

It is interesting to note the 95% confidence intervals for the means for the CR data from teachers. For handling student discipline and conflict resolution applicability, the 95% confidence intervals were above the mid-point of the scales, but not for CR positive socio-emotional influence on students and personal value of CR (see Table 5). Thus, we can definitively make a statement that the teachers felt that CR was valuable in its applicability for students in different situations and valuable for teachers in handling discipline. However, it is difficult to make a statement about CR positive socio-emotional influence on students and the value of CR to the teachers in their personal lives.

T-Tests were done to determine differences on ratings of CR between teachers who had participated in and used CR and all other teachers (see Table 4). The teachers who had CR training and used it in their classes (Group 1) rated the value of CR training in school significantly higher than the other teachers (Group 2) (t(29)=2.41, p=.011; one tailed). Although the ratings of Group 1 on positive socio-emotional influence and conflict resolution applicability in places other than school were higher than Group 2, the results are not statistically significant.

In addition, Group 1 found CR training for handling student discipline more valuable than did Group 2. This finding is almost significant (t(26)=2.01, p=.027; one tailed). The value of CR in other areas is not significantly different for the two groups.

Teachers also rated the difficulties they experienced associated with the use of CR in their teaching practices. Philosophical/psychological problems with use of CR, such as CR stirring up too much emotion in class, not focusing enough on social causes of conflict, and requiring too much psychological expertise of the teacher were rated (see Table 6). In addition, teachers rated their own problems with skillfulness in doing CR lessons.

Of the teachers who trained in and used CR, ten teachers indicated that philosophical/psychological aspects of CR were not a problem for them, while 3 others said that it was somewhat of a problem. Five teachers indicated that their own skillfulness with CR was not a problem for them, while 7 indicated that it was somewhat of a problem and one said that it was definitely a problem. The two teachers who were trained in CR but did not use it in their classes indicated that the two difficulties with CR named above were somewhat of a problem for them. One teacher who did not use CR indicated that it focuses too little on the social causes of the students' conflicts. No significant gender differences were observed for the CR findings stated above.

Campus comparisons. It is interesting to compare the trained teachers at Campus B (CR and CL training) with the other two Campuses, as receiving training in CL and CR was hypothesized to be mutually facilitative (Deutsch, 1988). Although no significant differences were found between Campus A and Campus B on the effects of CR on students and

self, the means on all the variables were higher for Campus
B (see Table 7-A).

It is also important to compare the trained teachers at
Campus B (CR and CL training) and Campus C (CL training
only) (see Table 7-B). No significant differences were
found on the ratings of effectiveness of CL for their
students. However, the mean of Campus B is higher than the
mean of Campus C for CL effectiveness in increasing academic
performance of students.

Training. Nine out of twelve teachers responded to
questions about the usefulness/non-usefulness of the
conflict resolution training at Campus A (see Table 8).
Generally teachers gave one response to each of the
questions. Four teachers mentioned specific aspects of CR
such as "active listening" and "perceptions" as being
useful. Three teachers mentioned awareness of CR and its
use in exploring students' feelings and discussing practical
problems students might have was of help to them. Two
mentioned student mediation as being useful. Four teachers
mentioned liking the trainer and her training approach with
their students. However, three teachers did not like some
of the jargon and one felt that some of the CR examples were
inappropriate to the school setting. One teacher mentioned
that staff meetings and workshops during Year 1 were not
useful. Most of the suggestions the teachers had for
improving CR training centered around having more/intensive
training and mediation training for the students (see Table

8). One teacher mentioned wanting lessons more specific to issues such as racial violence, street culture, and society's morality.

At Campus B, thirteen out of fourteen teachers responded to the questions about training. Of these thirteen respondents, 3 mentioned not participating in the CL training. In general, the teachers' responses show that they found the workshops to be quite useful and liked their trainers' approach to training (see Table 9). There were resounding endorsements of the trainer; four teachers mentioned they liked her and thanked ICCCR for the trainer. Only two people mentioned that they thought something was not useful; one mentioned "theory" and another "lecture format". Four teachers suggested continuing the training in CL. Teachers also made specific suggestions for improvement such as videotaping the classes, lesson planning, having more demonstration lessons, and visiting other schools.

Eight out of ten teachers responded to questions about the CL training at Campus C (see Table 10). Two teachers mentioned they liked the group make-up techniques. Two teachers mentioned workshops, in general, and one mentioned in-class observations, by the trainer were useful. One teacher did not find the workshops useful, while another didn't like "studying the book" and workshop scheduling. One teacher mentioned that working in groups tends to distract the students and his/her students learned better when working one-on-one with her/him. The teachers had

three types of suggestions for training improvement: two
mentioned wanting more materials (see Table 10); one wanted
more convenient scheduling of the workshops when more staff
could be involved; and one suggested having more in-class
observations and post-classroom conference for discussion
and future planning.

Because of training implications, we were also
interested in knowing whether training hours had a linear
relationship to the expertise of the teachers with the
intervention in which they were being trained (see Table
11). At Campus A (CR), training hours were positively
correlated with the rankings of the teachers' expertise and
facility in CR by the trainer (r=.553, p<.05), and also with
those by the Campus coordinator (r=.674, p<.01). At Campus
B (CR & CL), the training hours were not significantly
correlated with rankings by the trainer but they were
significantly correlated with those by the coordinator
(r=.517, p<.01). However, at Campus B, only the CL trainer
ranked the teachers on expertise with CL. At Campus C (CL),
training hours were significantly correlated with rankings
by the trainer (r=.642, p<.01), and those by the coordinator
(r=.495, p<.05). The training hours per site are given in
Table 12.

It is also important to note the correlations between
the rankings of the teachers and their reported use of CL/CR
in class (see Table 13). At Campus A, rankings by the
trainer were significantly correlated with reported use of

CR (an average of use of CR techniques) by the teachers
(spearman rho=.802, p<.01). At Campus B, rankings by the
trainer were positively but not significantly associated
with reported percentage of class time spent doing CL. At
Campus C, rankings by the trainer had no association with
the reported percentage of class-time spent doing CL. Since
different training models were used and different amounts of
time were spent by the trainers at each site, these results
are not surprising.

Students: Interview Data, Year One

Campus A (CR). The data considered here are general
broad categories which were mentioned by many students and
also ones which appeared important to the researchers for
evaluation of the interventions. The students were allowed
free responses and they generally gave one or two responses
to each question.

All the students interviewed at Campus A mentioned that
they had been in conflict resolution classes. These
students said that they found the CR lessons useful in most
situations (see Table 14). About 74% found it useful at
home. Some of the reasons given were that they viewed
conflicts differently and were better able to communicate
with their families. About 71% found it useful in school
because they learned to see others' point of view and began
to discuss potential points of conflicts more often. Of the
students who had jobs, 54% percent mentioned that CR was
useful in the workplace. Two of the salient reasons given

were that the students improved in explaining problems to
the boss and they experienced better relationships at work.
The 42% who mentioned that CR was not useful at work
mentioned not having conflicts or problems at work. Sixty-
two percent mentioned that CR was useful in the streets;
reasons given were greater self-control, control of anger,
and learning to avoid trouble.

The students liked several aspects of the CR lessons
(see Table 15): 35% mentioned role-playing, 47% mentioned
that it was helpful to know how to view conflicts/handle
them, and 26% mentioned that it was helpful to talk about
conflicts, others' and their own. Of the things the
students disliked about the CR lessons, 26% mentioned that
they were repetitive, too long, or took place too often.
Forty-two percent mentioned that there was nothing they
disliked about the lessons.

Several suggestions were made for making the lessons
more useful (see Table 16): different lesson presentation
formats (n=13), more role-playing (n=10), and dealing with
specific conflict issues/problems (n=5) were mentioned most
often. Five students did not have any suggestions.

Campus B (CR). All 34 students at Campus B mentioned
being in classes with CR lessons and found CR to be useful
in most situations (see Table 17). Seventy-one percent of
the students found CR to be useful at home. The reason most
commonly given was that it helped them to understand their
families and control themselves with family members. Of the

29% who mentioned not finding CR useful, 40% (n=4) mentioned knowing how to handle themselves already. Of the students who worked (n=26), 50% found CR useful in the workplace. Reasons most frequently given were that it helped with dealing with the boss, other workers, and clients. Of the 42% (n=11) who said that CR isn't useful in the workplace, 3 mentioned that they already know how to handle themselves. About 65% of the students mentioned that CR was useful in school. Reasons given most frequently were that CR helps with friendships and that students have learned to avoid fights. Of the 29% who said that CR is not useful in school, most mentioned that there was no need for CR in school. Only 29% of the students thought that CR was useful in the street. About 59% of the students said that CR is not useful in the street because they don't hang out, have no problems, or that people on the street are different and out to "outdo" others (n=6).

The students gave several types of responses to what they liked about the CR lessons (see Table 18). About 26% of the students mentioned liking the CR lessons in general, 24% mentioned that they liked knowing how to handle conflicts, and another 24% mentioned liking talking about their own and hearing about others' experiences. Two students mentioned that they didn't like anything about the CR lessons. The aspects of CR classes disliked by the most numbers of students were classes being too repetitive and/or boring (32%), class's attitude toward and/or participation

in the CR lessons (21%), and 4 students mentioned that the classes were unrealistic and unrelated to real life situations. Twenty-six percent of the students mentioned that they didn't dislike anything about the CR lessons.

On the question of how to improve CR lessons, many students (n=8) mentioned wanting discussions on real life situations such as drugs, rape, crime etc (see Table 19). "Do topics important for city kids," said one respondent. Many of the students mentioned wanting more role-playing (n=5), or more CR topics in general (n=10). Two students said that the lessons were useful as they were.

At both Campuses A and B, CR was thought to be useful by a majority at home, and useful by far fewer students in the streets.

Campus C (CL). All the students interviewed at Campus C (n=38) had been in one or more cooperative learning classes. The students were asked to think about the class in which they worked in cooperative groups most often and were asked what they had learned that made them work better in groups. Four communications skills were mentioned most often (see Table 20). These were: listening to each other (42%), offering to explain (37%), asking for help (32%), and criticizing ideas, not people (26%).

The students were also asked what they liked about this class (see Table 21). About 45% of the students said they learned more. Forty-five percent of the students also said that they liked the social contact, 37% found it to be "more

fun," 30% liked helping and/or teaching other students, and 26% said they had more of a chance to participate. Three students mentioned not liking CL at all. These same students said that they felt they were held back in learning or had to do all the work.

Others also gave similar reasons for not liking CL (see Table 21). The reasons most frequently given were that one person had to do all the work (30%), others did not do the work (13%), and less ground was covered in studies (13%).

Students: Questionnaire Data, Year Two

A majority of the students (75% or more) reported the use of one element or more of CR (Campus A) and CL (Campuses B and C) in class (see Table 22). In addition, in response to whether they found these elements to be useful or not, a majority checked 'useful' (70% or more). There is a correlation of .74 or more between the reported use and usefulness of the CL or CR elements. No ethnic and gender differences were observed at any of the campuses in the reports of CL/CR use in class and the usefulness of the CL/CR topics. Numbers of students reporting use and usefulness of CL/CR by campus is shown in Figures 9, 10, and 11.

Cooperative Learning only (Campuses B & C). Sixty-four percent of the respondents from Campus B said they learned more in CL groups, 32% said that they learned the same, and 4% said they learned less (see Table 23). From Campus C, 49% said they learned more, 38.4% said they learned the

same, and 12.3% said they learned less. The students were
also asked about whether they liked cooperative learning
(see Table 23). At Campus B, 73% of the respondents liked
it, 22% were n...ral, and 4% disliked it. At Campus C,
54.5% said they liked it, 21% were neutral, and 24% disliked
it. Chi-squares analyses showed that there were no
significant ethnic or gender differences in liking of and
learning in cooperative learning groups at either campus.

Campus differences are significant on students'
evaluation of learning in groups. Although a majority of
the students at each Campus (B and C) felt like they learned
more than usual in groups, T-Tests between the two campuses
show that the mean for Campus B was significantly higher
(mean=3.90) than for Campus C (mean=3.44), (t(121)=2.73,
p<.01). The differences between the two campuses on liking
of Cooperative Learning could not be compared as the
variances were significantly different: std. .839 for Campus
B versus 1.22 for Campus C. However, the mean for Campus B
(mean=3.98) is higher than it is for Campus C (3.24).

Conflict Resolution Only (Campus A). Students at
Campus A were asked whether they used what they had learned
about conflict resolution in different situations. An
overall index composed of the average of use of CR in
different situations showed that 35% said they used CR
frequently, 13.3% said they used it occasionally, and 51.1%
said they used it rarely (see Table 24). Interestingly, a
breakdown of use of CR by specific situations shows that a

larger percent (35.6%) rated using CR frequently at home
than anywhere else, especially at work (20.5 %). It is also
quite striking that 53.3% of the students reported rarely
using CR at work. These findings are similar to the
interview findings in which CR was reported as being useful
by many students at school and at home and by fewer students
at work and in the streets.

Correlations between self-reported use of CR in
specific situations and self-reported improvement in
handling conflicts in those areas are shown in Table 25. It
is interesting to note that use in one area is significantly
associated with improvement in handling conflicts in most
areas apart from "at job" which is a very general item.
Notice that use of CR at school has the highest associations
with feeling of improvement in handling conflict in all
areas. Chi-squares analyses showed that there were no
significant ethnic or gender differences for use of CR in
different situations, or in the overall use of CR.

Interpersonal Improvement Across Campuses.
Interpersonal improvement ratings were made by all students
regardless of the type of intervention (CL/CR) they
received. Means and 95% confidence intervals for the
interpersonal improvement items are shown in Table 26. The
means on feeling improvement in social interaction/working
together in groups, improvement in handling conflicts with
different people, and lessening of physical fights are all
above the mid-point of the scale, indicating general

improvement. One-way Anovas showed that the three campuses did not differ significantly from each other on the ratings on groupwork skills and improvement in handling of conflicts. However, Campus A differed significantly from Campus C on reports of lessening of physical fights. This indicates that Campus A students have felt that they became less involved in physical fights during the past Year while the students at Campus C do not feel the same level of improvement with regard to physical fighting.

It is also important to note the ethnic and gender means on the interpersonal improvement items (see Table 27). The four groups were: Black Males, Black Females, Hispanic Males, Hispanic Females. While there were no significant differences between the groups on effective interaction/groupwork skills and effective handling of conflicts, there was a significant difference for lessening of physical fights. Special contrasts showed that Black Males had a significantly lower score on lessening of physical fights as compared to Black Females indicating a lower feeling of improvement for Black Males (t(77)=3.68, p<.01). Th lower improvement of Hispanic Males compared with Hispanic Females approaches significance on lessening of physical fights during the past year (t(71)=1.95, p=.053). The difference between Black Males and Hispanic Males is not significant. The 95% confidence interval for the mean incorporates the mid-point of the scale, "can't decide," on lessening of physical fights only for Black

Males indicating that this group is not certain whether it has been less involved in physical fights during the past Year.

Multiple regression results. Standard multiple regression analyses were performed to predict the interpersonal improvement items from the students' reports of usefulness of CL at Campuses B and C, reported use of CR at Campus A, and an independent exposure to the interventions score. We were interested in knowing whether the independent exposure and use of the intervention had associations with the subjective evaluations of improvement the interventions were hypothesized to impact. The two predictors were considered important as they are both indicators of exposure to the training: one independent and one subjective.

At Campus A, CR Training Exposure and Use of CR by students are significant predictors of effective interaction/groupwork skills (R^2=.33, p<.01) and effective handling of conflict (R^2=.32, p<.01), but not of lessening of physical fights (see Table 28).

At Campus B, all three interpersonal improvement items are significantly predicted from independent exposure to CL and CL usefulness (see Table 29). The two predictors explained 23% of the variance in effective interaction/groupwork (p<.01), 27% of the variance in effective handling of conflicts (p<.01), and 26% of the variance in lessening of physical fights (p<.05).

At Campus C, effective interaction/groupwork skills and lessening of physical fights are significantly predicted from CL usefulness and CL training exposure (see Table 30). However, effective interaction groupwork skills and Lessening of physical fights are negatively related to CL training exposure. Effective handling of conflicts is not predicted from CL usefulness and exposure to the training.

Discussion

The discussion will first focus on the findings from the teachers, and then on the findings from the students, followed by an integration of the results from the two different groups. Next, the limitations of the study will be discussed and finally, future directions for further social validity/consumer satisfaction evaluations will be suggested.

The purpose of this paper was to determine teachers' and students' assessment of the effects of and satisfaction with the interventions of cooperative learning and conflict resolution introduced into the three campuses at Alternative High School.

Overall, the results are encouraging with respect to the social validity of these interventions. The teachers have given moderate endorsements of these interventions while the students have found these interventions to be useful and applicable to their situations. The details of these findings are discussed below.

Teachers

Although the small sample size makes it difficult to
obtain definitive results, several trends are clear in the
results from the teacher data. Most teachers were trained
in the intervention introduced at their campus and used it
in their classes. Teachers who trained in and used CL
tended to favorably evaluate the effects of CL on their
students regarding peer relationships and psychological
improvement, and in increasing academic achievement.

The teachers who were trained in CR also tended to
evaluate the applicability of CR quite favorably for their
students in school, at work, and in family groups. However,
the teachers felt that CR is only moderately valuable for
the neighborhood around the school campus. This is not
surprising as the neighborhoods around these campuses are
not considered very safe and friendly, hence, conflict
resolution skills may not have been considered applicable to
street violence. CR was judged by the teachers to be
somewhat effective in having a positive socio-emotional
influence on their students. For themselves, teachers found
that CR was helpful in dealing with student discipline, but
CR was deemed only somewhat valuable in their personal
lives. The training data show that during Year 2, the
trainer was training the students directly and the teachers
were not being trained as intensely as the students
(Mitchell, 1991). This may explain why the teachers have

not felt confident about the value of CR in their personal lives outside of school.

The CR training at Campus A had one unintended outcome which is indicative of its acceptance. As a result of the CR intervention, a number of the students desired mediation training and have been trained in dispute/conflict mediation by the ICCCR trainer. This program has been institutionalized for resolving disputes amongst the school members at Campus A. The Campus B students heard about the mediation training and have asked that a mediation group be formed at their campus (Campus B coordinator, personal communication).

The teachers who were trained in and used the interventions consistently rated the effects of the interventions higher than the teachers who did not use these interventions. The differences between these two groups of teachers, however, were not always significant. One explanation for not finding significant differences is the small sample size. Another explanation is that the teachers who did not use the interventions were still in a position to observe the effects of the interventions in their schools. Knowledge of the effects of the interventions might have been obtained through discussions with other staff members and/or with the students, or through direct observations of the students. This pattern of limited significant differences between the participating and non-participating teachers has also been found by Talmage,

Pascarella, and Ford (1984). In a three year study of CL, teachers who participated in CL training had significantly more positive attitudes towards CL than teachers from another school who were not trained in CL. However, there were no differences between the teachers who participated in CL training and those who didn't within the same school (Talmage, Pascarella, & Ford, 1984). Thus, the perceptions and/or observations of the effects of the interventions might be affected not only through use but also by being in a particular milieu where the intervention is taking place.

Campus comparisons for teachers showed that the teachers at Campus B gave the most positive ratings for the effects of the interventions, although the differences were not significant. As hypothesized, these higher ratings from Campus B may be because CL and CR are mutually facilitative: the combination is presumably more effective than CL or CR alone. However, a much bigger sample size is required to rigorously evaluate this hypothesis as significant differences were not obtained. A second explanation is that there might have been pre-existing differences among the teachers at these three campuses which might have affected their perceptions of effectiveness of the interventions. A third reason could be the differences in the training approaches of the trainers.

The responses from the teachers regarding the training suggest that at Campus B, the teachers were enthusiastic about the CL trainer and the CL training. At Campus A,

teachers endorsed the merits of the CR training and thought
the trainer was good with their students. However, some
teachers were uncertain about some of the CR "jargon" and
techniques. At Campus C, the teachers seem to like the
training and find it helpful, but their responses were not
as enthusiastic as the responses of the Campus B teachers.

The results from the training data also suggest that
teachers with different needs require different amounts of
training time to gain expertise in the interventions and to
use them. At Campuses A and C, training hours were
positively associated with the rankings of expertise of the
teachers by the trainers and the coordinators. This is not
the case at Campus B. However, the qualitative data show
that some of the teachers at Campus B had prior training in
cooperative learning. Thus, perhaps the teachers who were
already knowledgeable about CL did not spend as much time
with our trainer as some of the untrained teachers might
have. It is also useful to note that the training hours are
not associated with use of the interventions by the
teachers. Different amounts of training time is required
for different teachers before they feel comfortable using
new skills. In addition, teachers might have divergent
conceptions of the applicability of these skills in
different classes. Thus, although a teacher might have had
many hours of training, she might be applying that training
only in particular situations. Another teacher might have
had the same amount of training, but might feel that it is

applicable in most of her classes and, hence, be using it
more often.

Additionally, rankings of expertise are associated with
use of interventions (CR) only at Campus A. It is possible
that teachers felt that the teaching of conflict resolution
required more new professional skills than using cooperative
learning methods in their classrooms and, hence, they were
more likely to teach or use CR as they developed more
expertise. However, the teachers' responses from all three
campuses suggest a need and desire for more training
indicating that the teachers don't feel that they have
become experts in these interventions.

Students

All of the students interviewed in Year One and most of
the students who completed the intervention survey in Year
Two reported that CL/CR interventions were used in their
classes. Most of the students liked these interventions and
found them to be useful.

For cooperative learning, a majority of the students in
Year One from Campus C and Year Two from Campuses B and C
said that they liked cooperative learning and found that
they learned more in the CL classes. Again, it is
interesting to note campus differences here from data
collected in Year Two. Campus B was higher in its ratings
of the liking for and learning in CL classes than Campus C.
This result is concordant with our expectation that the
teachers at Campus B would be better at implementing CL

because they also had training in CR. In addition, Campus B teachers had more hours of CL training. Students' liking of and learning within the CL format might be dependent on how well conflicts are managed within the cooperative learning groups and the teachers' skill level in implementing CL. There are, of course, other possible explanations for these differences, namely differences between the trainers, the teachers, and/or the students at the two campuses.

Most students from Campus A reported finding CR useful and using CR skills occasionally or frequently during Year Two. However, a sizeable number also reported rarely using these skills in specific situations such as with friends, with family, or at work. The interview data from Year One can help in interpreting this finding. It appears that the benefits of CR are related not only to interpersonal behavior in using CR skills, but are also related to thinking about how to avoid provoking harmful situations and managing conflicts when they arise. Although the connection between cognitive problem-solving (thinking) and actual behavior has not been delineated by researchers (Urbain & Kendall, 1980), this cognitive component is considered important in anger management, in developing empathy and a sense of self-worth, and ultimately in violence prevention and in developing good social skills (Coulter, 1990; Prothrow-Stith, 1987; Urbain & Kendall, 1980).

The above explanation is applicable, in part, to the high correlations between use of CR in school and feelings

of improvement related to effective handling of conflicts in school, home, work settings, and neighborhood. Although the use of CR skills in particular situations and feelings of improvement in handling conflicts in those situations are significantly associated with each other, the correlations between use of CR skills in school and feelings of improvement in all other situations such as with family, friends, and at work are the highest. These students practiced the use of CR skills fairly regularly in school through role-playing and other CR exercises but some indicated that they did not need to or did not use the CR skills in many situations outside of school. Thus, improvement with regard to handling conflicts appears to be related to improvement not only through the use of CR behavioral skills but also, at the cognitive level, to a sense of efficacy in handling interpersonal relations by thinking about and evaluating alternatives to potential or real conflicts in different situations. Improvement in handling conflicts, thus, seems to have both behavioral and psychological dimensions.

Students from all three campuses felt that they had become better in their handling of interpersonal relations. Although there were no campus differences in the students' reports of improvement in effective groupwork skills and in handling of conflicts, the students from Campus A indicated that they experienced a greater decrease in physical fights than the students from Campus C. These results were not

unexpected. Conflict resolution and cooperation are two
sides of the same coin (Deutsch, 1973; 1985). In order to
cooperate effectively in accomplishing groupwork or joint
tasks, one needs constructive conflict resolution skills,
and in order to constructively resolve conflicts, one needs
to cooperate with the other party to define that conflict as
a common problem. Thus, although the emphases of the CL and
CR interventions were somewhat different, the principle
underlying the two interventions is the same: effective
interpersonal interaction which results in cooperation and
constructive resolution of conflicts. However, physical
fights are an extreme version of non-cooperation and
destructive conflict resolution. This specific component of
conflicts was discussed much more explicitly at Campus A
through the violence prevention module of the CR
intervention curriculum during Years One and Two, and at
Campus B during Year One, but not at Campus C. Hence, the
violence prevention module of the CR intervention at Campus
A might have helped the students in avoiding physical
conflicts.

Results were also intriguing in the reports of
lessening of physical fights with respect to the different
ethnic and gender groups. Black Males' self ratings on
decrease in physical fights was significantly lower than
that of Black Females. This indicates that they feel less
improvement with regards to getting into physical fights
than Black Females. Black Males also rated themselves the

lowest on improvement in effective groupwork skills. These
results are consonant with the literature on Black Males.
For example, Black Males often have more of an external
locus of control as compared to the rest of the population;
one explanation given is that it stems from their relatively
low status in society (Gurin et al., 1969). Black Males as
a group are most often the victims of violent crimes, and
thus, not always in control of what happens to them (Centers
for Disease Control, 1990; Prothrow-Stith, 1987). Hence,
this victimization might be linked to self-reports of
relatively little improvement with regard to physical
violence, in particular, and interpersonal skills in
general.

Regression analyses showed that exposure to the
interventions is linked to some interpersonal improvement
variables and not to others, depending on the campus. At
Campus A, effective interaction/groupwork skills and
effective handling of conflicts are significantly predicted
from the independent exposure measure and reports of use of
CR by the students. However, lessening of physical fights
is not predicted by either exposure measure. This lack of
result seems to be due to a statistical artifact: the mean
on lessening of physical fights is higher at Campus A than
at the other campuses and an inspection of the plot of raw
scores shows that regardless of the amount of exposure, most
of the students have felt a lessening of physical fights.
At Campus B, all of the interpersonal improvement items are

significantly associated with exposure to the intervention. As noted earlier, exposure to the violence prevention module of the CR curriculum is probably effective in helping students think about how to avoid fights, and dosage beyond a certain level is not required.

At Campus C, improvement of effective interaction and groupwork skills and lessening of physical fights are associated with measure of exposure to the intervention. Improvement in effective handling of conflicts was marginally predicted from the exposure measures. Curiously enough, a negative beta was found for the independent exposure to intervention for predicting effective interaction/groupwork skills. Thus, at Campus C, the most important predictor of improvement appears to be the students' reports of the usefulness of cooperative learning. As previously mentioned, one explanation for this finding is that the teachers at Campus C were not trained in conflict resolution skills. Hence, implementing the CL techniques might have been more difficult for these teachers. In addition, the teacher data show that the trainer rankings of teacher expertise are not associated with the amount of in-class time spent using CL. Thus, although the quantity of use of CL is accounted for in the exposure measures, the quality of CL use is not. The students' interpersonal improvement might be more sensitive to expertise of use of CL rather than just its use.

Although these regression results are correlational in
nature and do not, by themselves, demonstrate causality,
they strongly suggest causal links. These predictors-to-
the-outcomes analyses were conducted within a theoretical
framework which proposes a causal relationship between the
interventions and the interpersonal improvement of the
students. Thus, within the theoretical framework of the
study, and with the supporting qualitative and quantitative
empirical evidence, it can be safely asserted that exposure
to the interventions affected self-rated interpersonal
improvement of the students. Additionally, these predictors
are helpful in knowing whether indirect and specific aspects
of satisfaction, such as improvement related to particular
areas, are linked to direct but nonspecific aspects of
satisfaction, such as perceived usefulness and use of the
interventions by the students.

While the above results are complex and point to the
uniqueness of each campus in how the interventions were
perceived, how they were implemented, and the satisfaction
with those interventions, the similarities of these campuses
should not be overlooked. The student samples are similar
with respect to their SES and ethnic backgrounds, and their
reasons for entering AHS (Mitchell, 1991). The campuses are
united through a common Alternative High School philosophy
and mission. Thus, although the assessment of interventions
was primarily at the campus level, one has to keep in mind
the general principles on which these interventions were

founded, and the general population and environment in which they were implemented. From this vantage point, CL and CR seem to be applicable and valuable in an alternative inner-city school environment.

In conclusion, the results from the questionnaires from teachers and students, as well as the student interviews, indicate a general level of satisfaction with the interventions and their goals. Qualitative data available from AHS also suggest that the teachers and students were affected by the interventions in many ways that were not captured by the quantitative survey data. The reception of the mediation program and regular use of the CR curriculum in classes at Campus A are positive signs of acceptance of the CR program. Another indication of satisfaction is at Campus B, where the students wanted their own mediation program after hearing about the Campus A program. Additionally, cooperative learning continues to be utilized regularly in Campus B and Campus C a year after the project has ended. Teachers from all three campuses mention wanting more training in the interventions they received at their Campuses; and they frequently reported that interventions were useful in their teaching practices. In fact, ICCCR provided an extra eight days of training during Fall semester of 1990 at the request of the school. Interviews with the campus coordinators and with the Principal of Alterative High School revealed that the program had other subtle effects. Conflict resolution and cooperative

learning have introduced new ways of thinking about
education and about how to organize work in the school and
there is a more collaborative tone to the staff meetings.
Thus, the measures of success demonstrate that satisfaction
with the interventions is moderate but pervasive.

Limitations

While the findings of this study are generally
positive, they have to be interpreted with caution for
several reasons. Some reasons have already been touched
upon in the section above. These reasons and additional
possible constraints are discussed below.

Analysis of the teacher data was limited due to the
small sample size. Thus, gender and ethnic differences
could not be fully explored. Another limitation is that the
teachers were being asked to observe the effects of
cooperative learning and conflict resolution while they were
still learning these skills. Battistich et al. (in press)
note that the measurements of the effects of an educational
intervention while it is being implemented might be
difficult as the students experience the interventions from
the teachers who are in the process of mastering the
educational technology. This would indicate that teacher
assessments of the effects of these interventions would be
different as they became more skilled in their use of CL and
CR methods. The teacher data suggested, in fact, that
teachers wanted more training and hence, needed to refine
their skills with the two interventions. Thus, although the

data on satisfaction are useful for monitoring program implementation and receptivity to the programs, the teachers' observations on the intervention effects on students should be interpreted with some caution. After more training the teachers might have observed even stronger positive results on their students, or the effects might have flattened out.

The second issue with the teacher data is that there might be pre-existing differences among the teachers at the three campuses which might have affected the receptivity to, and hence, the perception of the effects of the interventions. However, the qualitative data show that the at Campus B, where the most positive ratings were obtained, teachers were more apt to challenge the theory and philosophy of the interventions, especially during Year One (personal communication, Vernay Mitchell, ICCCR ethnographer). Thus, one could argue that since these teachers were more active, the training might have been absorbed more than at other campuses. Conversely, one could make the conjecture that since these teachers were more resistant, the training might have been less effective than at other campuses. Thus, pre-existing differences do not help to explain why the expected pattern of results were obtained with regard to the perceived effects of the interventions. Thus, there seems to be an intervention effect above and beyond the effects of the uniqueness of

samples or campuses. In any case, future replications with larger sample sizes are desirable.

Information on student satisfaction was also constrained by the sample size. Thus, the analysis of the different student groups (ethnic and gender) could not be conducted at the campus level. In addition, pure control groups were not available to study the ways in which the interventions affected the self-rated improvement of the students. It is possible that maturation may affected the students' ratings of interpersonal improvement. This threat could be addressed through the use of a control group. However, regression analysis shows that independent measures of exposure to the training are significantly associated with interpersonal improvement. Maturation might explain some of the interpersonal improvement, but it is not associated with exposure to the intervention, thus, it is not a confounding factor in the attribution of interpersonal improvement ratings to the interventions.

In addition, as noted earlier, the differences obtained between Campuses B and C on liking of and learning in the cooperative learning format might be due to differences between the students at these sites. Qualitative data show that the student populations at all three campuses of AHS are quite similar demographically and also with respect to their reasons for coming to AHS. However, Campus C tends to get students with less social and academic problems than Campus B (Mitchell, 1991; personal communication, Principal,

AHS). Thus, logically, and as is indicated by previous
research (Johnson & Johnson, 1989), the implementation of
cooperative learning should have been easier and possibly
shown better results than at Campus C. However, although
the results at both campuses are generally positive, the
results from Campus B are more favorable. Thus, it is more
probable that these results were obtained due to the
differences in the implementation of the interventions
rather than differences between the students at the two
campuses. As noted above, the teachers at Campus B had more
training in CL than the teachers at Campus C, and they
received training in CR.

Lastly, a critic might suggest social desirability,
which influences self-ratings in the positive direction,
might have affected the obtained findings. This criticism
is not plausible for several reasons. Firstly, anonymity
was guaranteed to the teachers and students, and multiple
item scales were used for the most part, as these tend to
reduce the effects of social desirability. Secondly, self-
rated improvement of the students is predicted from an
independent exposure to the interventions. Hence, we can
safely state that self-rated interpersonal improvement was,
in part, due to the interventions. Thirdly, the teachers
were not rating themselves, but ICCCR interventions and the
effects of those interventions on their students and
themselves. In addition, the qualitative data indicate that
these teachers felt quite free to criticize the

interventions and the training when they were dissatisfied
with them. Thus, social desirability does not seem likely
to have occurred.

In addressing the limitations of this study, it is
important to keep in mind the nature of field research or
program evaluation. Even with a control group, a very
thoughtful analysis of the effects of, and participants'
satisfaction with, the programs is required on the part of
researchers. Selection cannot be completely ruled out in
field research, especially when intact groups are used, and
history can certainly be unique to any one group or area
where the program is implemented, with or without
randomization. However, pre-existing group differences are
not a major concern for studies of consumer satisfaction
and/or social validity, since these studies are not
primarily concerned with generalization of that satisfaction
to other groups. This is because social validity is
concerned with the needs of a particular group, the social
program procedures applied to that group to address those
needs, and that particular group's reasons for being
satisfied and/or concerned with the interventions. If a
similar implementation of the social program occurs with
another group with similar needs, we can safely hypothesize
that the social program is applicable, and the participants
would have a similar reaction. However, this is a secondary
consideration. Thus, what is of first importance for the
researcher is to pay attention to plausible alternative

hypotheses which could jeopardize the attribution of the
obtained satisfaction ratings to the interventions for a
given group. The reasons for satisfaction/dissatisfaction
with the programs are important to evaluate for a given
population. A black-box approach to evaluations of field
research is not appropriate (Rossi & Wright, 1984). This is
particularly true for social validity.

A fairly detailed level of inquiry was employed with
regard to the various facets of the CL and CR programs for
this report, and the teachers and the students were asked to
rate their perceptions of the effectiveness of and their
satisfaction with those program components. In addition,
much qualitative data were collected to supplement the
quantitative data. Within this framework, what may be
alternative hypotheses for the satisfaction ratings are not
a major issue as the questions regarding interventions were
quite straightforward, and the convergence of the pattern of
results from the qualitative and quantitative data gives us
greater confidence in our findings.

This brings us to the question of whether satisfaction
with these interventions can be expected in other groups
with similar needs. The results outlined in this report are
positive. In addition, earlier research on cooperative
learning (Johnson & Johnson, 1989) and conflict resolution
(Wilson-Brewer et al., 1991; Lam, 1989) has shown similar
programs to be quite well received and effective in meeting
similar needs with a wide variety populations. Thus,

judging from the context of previous results and the findings of this report, the answer seems to be yes. These interventions seem to be applicable and useful for an inner city minority population.

Future Directions

It is clear from this study that several channels of obtaining information on the worth of a program need to be used. Although this study has circumvented several problems that plague consumer satisfaction studies in general, such as use of single items of satisfaction and non-captive samples (Lebow, 1982), several suggestions can be made. In future, in addition to collecting intensive survey and open-ended interview data from the program recipients, independent observations are needed by trained observers to evaluate the effects of a training program. This kind of close monitoring is important to independently determine why programs work or don't work and are liked or not liked by the recipients. For example, for use of an educational technology, independent classroom observations need to be documented by trained observers to know how these technologies are being implemented. These checks would allow the researcher to validly evaluate the implementation of the interventions, and hence, why certain effects are obtained on the students. A long-term longitudinal design is desirable for these purposes.

Furthermore, to monitor proper program implementation, data should be collected on the effectiveness of the

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trainers. In any school change or delivery of school-based programs, the skills of the change agent, trainer, or assister are a crucial influence for the success of a school improvement or staff development program (Saxl, Lieberman, & Miles, 1987) and hence, satisfaction with that program. Therefore, systematic data should be collected on the effectiveness of the trainers or the change agent to evaluate the process of program implementation. Very little systematic data were gathered on the effectiveness of the trainers themselves for this report. In fact, Schaps (1990) suggests that implementation of programs of cooperative learning need more attention now rather than determining whether or not cooperative learning is a sound educational technology.

In addition, for a closer tailoring of a program to its site, more information should be collected on the reasons why the program is needed and the intensity of those needs. To enable teachers to implement a particular technology, organizational needs and individual teachers' concerns have to be addressed (Hall & Loucks, 1978). Documentation of such needs is also helpful in evaluating the use/non-use of training and in assessing satisfaction with that training (Hall & Loucks, 1980). Needs from the students' perspective, too, have to be considered. For example, in a study of a school mediation program it was noted that girls utilized the mediation services more than boys (Araki, 1990). Interviews with the Campus A and Campus B

coordinators at the end of the ICCCR program indicated that girls more than boys in those campuses were involved in subtle conflicts and needed dispute resolution for these conflicts. In addition, it is apparent from this report that African American males might have needs which require special attention for them to feel a greater sense of improvment. Thus, the types of conflict resolution needed by different student groups would be very important to study prior to intervention planning and implementation. Seeley (1989) notes that CR could be incorporated into the curriculum in various classes, such as in English-as-a-Second-Language or careers education classes. Close tailoring of a program to its site could be achieved by collecting large amounts of relevant information from the potential recipients of the intervention before, as well as during, implementation of the programs.

The above suggestions for evaluating the social validity of the program, along with the methods utilized for this report, would constitute close to an "ideal" evaluation of the social validity of a program. However, conducting such an ideal study would be quite costly and would require more funds than are usually available for such an investigation (personal communication, Morton Deutsch). Thus, the evaluator often has to be practical, and choose to give rigorous attention to only a few specific aspects of the study which are of primary importance.

Lastly, although this study did not find any significant gender differences among the faculty at the three campuses, the mean ratings of the effectiveness of interventions were consistently higher for women teachers than for men teachers. This gender difference would be important to explore with a larger sample size. Are there subtle differences between males and females in the use of interventions or only in the perceptions of effects and satisfaction with the program? For example, in one study gender differences were found within the cooperative learning format (in Lamberigts, 1980). To discipline children who were breaking rules, socially-complex women tended to utilize socially-inducive behaviors while socially-complex men tended to use norm-inducive behaviors. These subtle gender differences in the use of an educational technology or any other training would be interesting and informative to explore. In addition, preconceived beliefs and attitudes probably affect training readiness and implementation of new skills and perceptions of effectiveness of that training. For example, in one study, the importance of the use of cooperative learning was positively associated with the teachers' emphasis on students' socio-emotional development (Hall, Villeme, & Burley, 1986). These orientations would be important to explore and address to be assured that training has the impact it purports to have.

In conclusion, social validity is the valuation of a
program by its recipients because it satisfies their needs
and is useful in some way. The recipients of the program of
cooperative learning and conflict resolution programs at AHS
liked these programs and found them to be useful and
applicable to their situations.

References

Araki, C.T. (1990). Dispute management in schools. <u>Mediation Quarterly</u>, <u>8</u>(1), 51-62

Battistich, V., Watson, M., Solomon, D., Schaps, E., & Solomon, J. (In Press). The child development project: A comprehensive program for the development of prosocial character. In W.M. Kurtines & J. L. Gewirtz (Eds.), <u>Handbook of moral behavior and development: Vol 3. Application</u>. Hillsdale, NJ: Earlbaum.

Centers for Disease Control. (Dec 7, 1990). <u>Morbidity and mortality weekly report</u>, <u>39</u>(48), 869-873. Atlanta GA:Health & Human Services, Centers for Disease Control.

Clarke, J. (1990). Murray Mathieson: a Canadian perspective. <u>Cooperative Learning</u>, <u>10</u>(4), 9-12

Clark, M.P. & Mann, N. (1989). Mediation in Poughkeepsie middle school. <u>The Fourth R</u>, <u>20</u>, 5-6.

Cohen, R. (1989). School mediation in New England. <u>The Fourth R</u>, <u>19</u>, 3.

Coulter, E. (September, 1990). School violence: an alarming trend. <u>The Fourth R</u>, <u>28</u>, 1,3.

DelMaestro, R. (July, 1989). Mediation at Gorton High School. <u>The Fourth R</u>, <u>21</u>, 4-5.

Deutsch, M. (1949a). A theory of co-operation and competition. <u>Human Relations</u>, <u>2</u>(2), 129-152.

Deutsch, M. (1973). <u>The resolution of conflict. Constructive and destructive processes</u>. New Haven: Yale University.

Deutsch, M. (1985). <u>Distributive justice. A social-psychological perspective</u>. New Haven: Yale University.

Deutsch, M. (1988). <u>Research on the effects of training in conflict resolution and cooperative learning</u>. International Center for Cooperation and Conflict Resolution, Teachers College, Columbia University.

Deutsch, M. (1991). <u>Effects of cooperative learning and conflict resolution in an alternative high school</u>. Research report to Grant Foundation. Research report to Grant Foundation. International Center for Cooperation and Conflict Resolution: Teachers College, Columbia University.

Ellis, S. (1985). Introducing cooperative learning groups: a district wide effort. The Journal of Staff Development, 6(2), 52-59.

Freed, E. (September, 1990). You mean, I can just ask for what I want?: teaching communication skills to violent youth. The Fourth R, 28, 3-5.

Graves, N. & Graves, T. (1991). Avril Lee & Judy Rob: an Australian teaching team. Cooperative Learning, 11(4), 10-14

Gurin, P., Gurin, G., Lao, R. C., & Beattie, M. (1969). Internal- external control in motivational dynamics of negro youth. Journal of Social Issues, 26, 29-53.

Hall, B.W., & Villeme, M.G., & Burley, W.W. (1986). Humanistic orientation and selected teaching practices among 1st-Year teachers. Journal of Humanistic Education and Development, 25(1), 12-17.

Hall, G.H. & Loucks, S. (1978). Teacher concerns as a basis for facilitating and personalizing staff development. Teachers College Record, 80(1), 36-55.

Johnson, D.W. & Johnson, R.T. (1989). Cooperation and competition. Theory and research. Edina, MI: Interaction Book.

Keeney, S. (1989). Thoughts on school mediation from a teacher/practitioner. The Fourth R, 20, 1, 3.

Kohn, A. (1990). The abc's of caring. The Fourth R, 26, 1, 4-9.

Lambergits, R. (1987-1988). Cooperative vs. traditional learning settings and the educational climate pereived by teachers. Journal of Classroom Interaction, 23(2), 45-53.

Lam, J. A. (1989). The impact of conflict resolution programs on schools: a review and synthesis of the evidence. Amherst, MA: N.A.M.E.

Lazarowitz, R. (1991). Learning biology cooperatively: an Isreali junior high school study. Cooperative Learning, 11(3), 19-21

Lebow, J. (1982). Consumer satisfaction with mental health treatment. Psychological Bulletin, 91(2), 244-259.

Maher, C.A. (1986). Evaluation of a program for improving conflict management skills of special services directors. <u>Journal of School Psychology</u>, <u>24</u>, 45-53

McElroy, K.B. (1989). A taste of cooperativeness within an elementary school. <u>The Pointer</u>, <u>33</u>(2), 34-38.

McMahon, R.J. & Forehand, R.L. (1983). Consumer satisfaction in Behavioral treatment of children: types, issues, and recommendations. <u>Behavior Therapy</u>, <u>14</u>, 209-225.

Mitchell, V. (1991). <u>A qualitative study of training in conflict resolution and cooperative learning in an alternative high school</u>. Research report to Grant Foundation. International Center for Cooperation and Conflict Resolution: Teachers College, Columbia University.

Moskowitz, J.M., Malvin, J.H., Schaeffer, G.A., & Schaps, E.(1985). Evaluation of jigsaw, a cooperative learning technique. <u>Contemporary Educational Psychology</u>, <u>10</u>, 104-112.

Prothrow-Stith, D. (1987). <u>Violence prevention curriculum for adolescents</u>. Newton, MA: Education Development Center

Reynolds C. & Salend, S.J. (1989). Cooperative learning in special education teacher preparation programs. <u>Teacher Education and Special Education</u>, <u>12</u>(3), 91-95.

Rossi, P.H. & Wright, J.D. (1984). Evaluation research: An assessment. <u>Annual Review of Sociology</u>, <u>10</u>, 331-352.

Saxl, E.R., Lieberman, A., & Miles, M.B. (1987). Help is at hand: new knowledge for teachers as staff developers. <u>Journal of Staff Development</u>, <u>8</u>(1), 7-11.

Schaps, E. (1990). Cooperative learning: the challange in the '90s. <u>Cooperative Learning</u>, <u>10</u>(4), 5-8.

Schultz, S. (1990). We strive for the best. <u>The Fourth R</u>, <u>25</u>, 7-8.

Seeley, C. (1989). An educator's perspective. <u>The Fourth R</u>, <u>20</u>, 6.

Slavin, R.E. (1980). Cooperative learning. <u>Review of Educational Research</u>, <u>50</u>(2), 315-342.

Solomon, D., Watson, M., Schaps, E., Battistich, V., & Solomon, J. (1990). Cooperative learning as part of a comprehensive classroom program designed to promote prosocial development. In S. Sharan (Ed.) <u>Cooperative Learning, theory and research</u>, pp. 231-260. New York: Praeger.

Storie, F. (1989). Creative conflict resolution comes to Canada. <u>The Fourth R</u>, <u>19</u>, 4.

Talmage, H., Pascarella, E.T., & Ford, S. (1984). The influence of cooperative learning strategies on teacher practices, student perceptions of the learning enviornment, and academic achievement. <u>American Educational Research Journal</u>, <u>21</u>(1), 163-179.

Urbain, E.S. & Kendall, P. (1980). Review of social-cognitive problem-solving with children. <u>Psychological Bulletin</u>, <u>88</u>(1), 109-143.

Van Slyck & Stern (In press). Conflict resolutions in educational settings: assessing the impact of peer mediation programs. In K. Duffy, P. Olzak, & J. Grosch (Eds.), <u>The art and science of community mediation: A handbook for practitioners and researchers</u>. New York: Guilford.

Wilson-Brewer, R., Cohen, S., O'Donnell, L., & Goodman, I. F. (1991). Violence prevention for young adolescents: a survey of the state of the art. Revised version of working paper prepared for the conference, "Violence Prevention for Young Teens", held in Washington D.C., July 12-13, 1990.

Wilson-Brewer, R. & Jacklin, B. (1990). Violence prevention strategies targeted at the general population of minority youth. Paper prepared for the Forum on Youth Violence in Minority Communities: Setting the Agenda for Prevention. Atlanta, GA: Education Development Center.

Wolf, R. M. (1984). <u>Evaluation in education</u>. New York: Praeger.

Wolf, M.M. (1978). Social validity: the case for subjective measurement or how applied behavior analysis is finding its heart. <u>Journal of Applied Behavior Analysis</u>, <u>11</u>, 203-214.

Table 1

REPORTS OF TRAINING IN CL/CR FROM TEACHERS
YEAR 2

COOPERATIVE LEARNING (CL)

	TRAINING N=25		NO TRAINING N=10		TOTAL
	USED	NOT USED	USED	NOT USED	
CAMPUS A	3	1	6	2	12
CAMPUS B	9	2	2	0	13
CAMPUS C	10	0	0	0	10
TOTAL	22	3	8	2	35

NOTE: ALL TEACHERS FROM CAMPUS A WHO HAD TRAINING IN CL AND
      USED IT ALSO HAD TRAINING IN CR AND USED IT IN THEIR
      CLASSES

CONFLICT RESOLUTION (CR)

	TRAINING N=15		NO TRAINING N=21		TOTAL
	USED	NOT USED	USED	NOT USED	
CAMPUS A	8	0	0	4	12
CAMPUS B	5	2	2	5	14
CAMPUS C	0	0	0	10	10
TOTAL	13	2	2	19	36

NOTE: ALL TEACHERS FROM CAMPUS B WHO HAD TRAINING IN CR AND
      USED IT ALSO HAD TRAINING IN CL AND USED IT IN THEIR
      CLASSES

Table 2

MEANS AND 95% CONFIDENCE INTERVALS FOR THE EFFECTIVENESS OF
CL AS RATED BY TEACHERS

GROUP 1: TEACHERS WHO TRAINED IN AND USED CL
(N=21)

	MEAN	SD	CI(95%)
STUDENT PSYCHOLOGICAL IMPROVEMENT	3.57	.643	3.29 - 3.85
POSITIVE PEER RELATIONS	4.10	.485	3.89 - 4.31
INCREASING ACADEMIC PERFORMANCE	3.48	.814	3.13 - 3.83

GROUP 2: ALL OTHER TEACHERS
(N=13)

	MEAN	SD	CI(95%)
STUDENT PSYCHOLOGICAL IMPROVEMENT	3.23	.462	2.98 - 3.48
POSITIVE PEER RELATIONS	3.95	.405	3.73 - 4.17
INCREASING ACADEMIC PERFORMANCE	2.85	.689	2.46 - 3.22

Scale: 1=Not effective; 2=A little effective;
       3=Somewhat effective; 4=Generally effective
       5=Very much effective

Table 3

PROBLEMS ASSOCIATED WITH INTERVENTIONS -- TEACHERS

TEACHERS WHO PARTICIPATED IN AND USED COOPERATIVE LEARNING
(FREQUENCIES)

	NOT A PROBLEM	SOMEWHAT OF APROBLEM	DEFINITELY APROBLEM
NON-CONDUCIVE TO LEARNING	11	10	1
LACK OF SKILLS/SUPPORT	10	12	0

Table 4

DIFFERENCES BETWEEN TEACHER GROUPS ON EFFECTS AND VALUE OF
CONFLICT RESOLUTION (YEAR 2)

GROUP 1:   Conflict Resolution Training and Use
GROUP 2:   All others

Applicability of CR for Students	Group 1 (n=13)	Group 2 (n=18)	
In School	4.23(.927)	3.33(1.09)	t(29)=2.41, p=.011*
At Work	3.77(1.17)	3.39(1.09)	t(29)=.93, p=.18
In Family Group	4.00(1.00)	3.44(1.15)	t(29)=1.40, p=.086
In Student Disciplinary Committees	3.92(.900)	3.44(1.25)	t(29)=1.92, p=.13
Around School Neighborhood	3.08(1.04)	2.78(1.06)	t(29)=.78, p=.22
Conflict Resolution Applicability (Index of the above Items)	3.65(.895)	3.18(1.02)	t(29)=1.33, p=.096

One tailed test.   Bonferroni alpha=.015

Scale: 1=Not valuable; 2=Little value;
       3=Moderately valuable; 4=Quite valuable;
       5=Very valuable

Effects on students	Group 1 (n=13)	Group 2 (n=18)	
Positive Socio-Emotional Influence	3.10(.899)	2.96(1.0)	t(29)=.41, p=.34

Scale: 1=Not effective; 2=A little effective;
       3=Somewhat effective; 4=Generally effective
       5=Very much effective

Table 4 cont.

Effects on Self	Group 1 (n=13)	Group 2 (n= 15 to 19)	
Personal Value of CR	3.17(1.03)	2.86(.940)	t(30)=.87, p=.19
Handling Student Discipline	3.69(1.18)	2.87(.990)	t(26)=2.01, p=.027+

One tailed test.   Bonferroni alpha=.025

Scale: 1=Not valuable; 2=Little value;
       3=Moderately valuable; 4=Quite valuable;
       5=Very valuable

Table 5

MEANS AND 95% CONFIDENCE INTERVALS FOR THE EFFECTIVENESS OF
CR AS RATED BY TEACHERS

HI=MORE VALUABLE, APPLICABLE, AND/OR EFFECTIVE

GROUP 1: TEACHERS WHO TRAINED IN AND USED CR
(N=13)

	MEAN	SD	CI(95%)
POSITIVE SOCIO-EMOTIONAL INFLUENCE ON STUDENTS	3.10	.899	2.61 - 3.59
APPLICABILITY OF CR (FOR STUDENTS)	3.65	.895	3.18 - 4.12
PERSONAL VALUE OF CR (FOR TEACHERS)	3.17	1.03	2.61 - 3.73
HANDLING STUDENT DISCIPLINE (FOR TEACHERS)	3.69	1.18	3.05 - 4.33

GROUP 2: ALL OTHER TEACHERS
(N=19)

	MEAN	SD	CI(95%)
POSITIVE SOCIO-EMOTIONAL INFLUENCE ON STUDENTS	2.96	1.00	2.50 - 3.42
APPLICABILITY OF CR (FOR STUDENTS)	3.18	1.02	2.71 - 3.65
PERSONAL VALUE OF CR (FOR TEACHERS)	2.86	.940	2.43 - 3.29
HANDLING STUDENT DISCIPLINE	2.87	.990	2.42 - 3.32

Table 6

PROBLEMS ASSOCIATED WITH TEACHING CONFLICT RESOLUTION SKILLS

TEACHERS WHO PARTICIPATED IN AND USED CONFLICT RESOLUTION
(FREQUENCIES)

	NOT A PROBLEM	SOMEWHAT OF A PROBLEM	DEFINITELY A PROBLEM
PHILOSOPHICAL/ PSYCHOLOGICAL	10	3	0
FELT UNSKILLED	5	7	1

Table 7-A

CAMPUS DIFFERENCES OF CR RATINGS FOR TEACHERS WHO
PARTICIPATED IN AND USED CR

EFFECTS ON STUDENTS

	Campus A (n=8)	Campus B (n=5)	
Positive Socio-Emotional Influence	2.79(.779)	3.60(.925)	t(11)=-1.71, p=.12
Conflict Resolution Applicability	3.39(.915)	4.05(.775)	t(11)=-1.34, p=.21
CR Value in School	4.00(1.07)	4.60(.548)	t(11)=-1.15, p=.27

Bonferroni Alpha=.016

EFFECTS ON SELF

	Campus A (n=8)	Campus B (n=5)	
Personal Value	2.63(.959)	3.76(.792)	t(11)=-2.21, p=.05
Handling Student Discipline	3.50(1.41)	4.00(.707)	t(11)=-.73, p=.48

Bonferroni Alpha=.025

PROBLEMS WITH CR

	Campus A (n=8)	Campus B (n=5)	
Philosophical/ Psychological	1.40(.550)	1.25(.354)	t(11)=.56, p=.585
Felt Unskilled	1.87(.641)	1.80(1.30)	t(11)=.14, p=.891

Bonferroni Alpha=.025

Table 7-B

CAMPUS DIFFERENCES OF CL RATINGS FOR TEACHERS WHO
PARTICIPATED IN AND USED CL

EFFECTS ON STUDENTS

	Campus C (n=9)	Campus B (n=9)	
Student Psychological Improvement	3.64 (.849)	3.61 (.397)	Variances sig dif
Positive Peer Relations	4.07 (.494)	4.15 (.475)	$t(16)=-.32$, $p=.75$
Increasing Academic Performance	3.22 (.972)	3.89 (.333)	Variance sig dif

Bonferroni Alpha=.016

PROBLEMS WITH CL

	Campus C (n=10)	Campus B (n=9)	
Non-Conducive to Learning	2.02 (.841)	2.07 (1.40)	$t(17)=2.78$, N.S.
Lack of Skills/support	2.28 (1.01)	1.72 (.579)	$t(17)=-1.44$, N.S.

Bonferroni Alpha=.025

REPORTED USE OF CL
(Percentage of Class-time used doing CL)

Campus C (n=10)	20.80 (18.43)	
		$t(16)=-.57$, N.S.
Campus B (n=8)	16.37 (12.85)	

Table 8

CAMPUS A TEACHERS' REACTIONS TO CR TRAINING

PLEASE CONSIDER ALL TRAINING WORKSHOPS AND TIME SPENT WITH
TRAINING LEADER IN ANSWERING THE FOLLOWING QUESTIONS

Q.1 What aspect of the training in cooperative learning
and/or conflict resolution have you found useful?

	Number responding
Specific aspects of CR, such as "Active listening", "perceptions"	N=4
Awareness of CR and its use for exploring students' problems and feelings	N=3
Student Mediation	N=2
Liked the trainer and her approach with the students	N=4

Q.2 What aspects of training were not useful to you?

Some of the CR jargon, such as "chips/chops" and "A.E.I.O.U."	N=3
Some CR examples inappropriate to school settings	N=1
Staff meetings, workshops last year	N=1

Q. 3 Please use the following space to list any suggestions
for improving our training programs (e.g. content areas,
training and workshop formats, scheduling, staff support,
etc.)

More training, intensive training, student mediation training	N=4
Lessons more specific to the issues students deal with such as racial violence, street culture, society's morality	N=1

Table 9

CAMPUS B TEACHERS' REACTIONS TO CL TRAINING

PLEASE CONSIDER ALL TRAINING WORKSHOPS AND TIME SPENT WITH
TRAINING LEADER IN ANSWERING THE FOLLOWING QUESTIONS

Q.1 What aspect of the training in cooperative learning
and/or conflict resolution have you found useful?

	Number responding
Good workshops; the trainer was very good "(she) is great"	N=6
Sharing information, own experiences with trainer, others	N=2
Have not participated in CL training	N=3

Q.2 What aspects of training were not useful to you?

"Lecture format"	N=1
"Theory"	N=1
Everything was useful	N=3

Q. 3 Please use the following space to list any suggestions
for improving our training programs (e.g. content areas,
training and workshop formats, scheduling, staff support,
etc.)

More training	N=3
More demonstration lessons Family group lessons More concrete lesson plans	N=3
Videotaping class sessions, school trips	N=2

Table 10

CAMPUS C TEACHERS' REACTIONS TO CL TRAINING

PLEASE CONSIDER ALL TRAINING WORKSHOPS AND TIME SPENT WITH
TRAINING LEADER IN ANSWERING THE FOLLOWING QUESTIONS

Q.1 What aspect of the training in cooperative learning
and/or conflict resolution have you found useful?

	Number responding
Group make-up techniques	N=2
In general, workshops with the trainer	N=2
In-class observations by the trainer	N=1

Q.2 What aspects of training were not useful to you?

Workshops	N=1
"Studying the book" and scheduling	N=1
Students distractable in groups. They tend to learn better one on one with the teacher	N=1

Q. 3 Please use the following space to list any suggestions
for improving our training programs (e.g. content areas,
training and workshop formats, scheduling, staff support,
etc.)

Need more materials specific to CL	N=2
More convenient scheduling of workshops when more staff can be involved	N=1
More in-class observations; post-classroom conferences	N=1

Table 11

INTERCORRELATIONS BETWEEN TRAINING HOURS AND RANKINGS OF
EXPERTISE

TRAINHRS: TOTAL TRAINING HOURS OVER TWO YEARS REPORTED BY
          TRAINERS
RANKTR : RANKINGS OF ABILITY AND EXPERTISE OF TEACHERS WITH
          CL/CR BY TRAINERS
RANKCOR : RANKINGS OF ABILITY AND EXPERTISE OF TEACHERS WITH
          CL/CR BY CAMPUS COORDINATOR

(NON-PARAMETRIC TESTS)

CAMPUS A

N=12

	TRAINHRS	RANKTR	RANKCOR
TRAINHRS	1.000		
RANKTR	.553*	1.000	
RANKCOR	.674**	.406	1.000

* p<.05   ** p<.01

CAMPUS B

N=13

	TRAINHRS	RANKTR	RANKCOR
TRAINHRS	1.000		
RANKTR	-.039	1.000	
RANKCOR	.517**	.088	1.000

* p<.05   ** p<.01

CAMPUS C:

N=14

	TRAINHRS	RANKTR	RANKCOR
TRAINHRS	1.000		
RANKTR	.642**	1.000	
RANKCOR	.495*	.706**	1.000

* p<.05   ** p<.01

Table 12

MEANS AND STANDARD DEVIATIONS OF TRAINING HOURS BY CAMPUS FOR TEACHERS WHO PARTICIPATED IN TRAINING

	YEAR 1		YEAR 2		TOTAL	
	MEAN	STD.DEV	MEAN	STD.DEV	MEAN	STD.DEV
CAMPUS A	69.85	23.44	12.50	9.93	70.53	38.46
CAMPUS B	55.62	17.59	17.05	9.21	45.52	29.99
CAMPUS C	33.00	4.00	8.73	2.94	38.77	10.24

Note: The Year 1 training hours include the initial two day CL training workshop for Campuses B & C, and three day CR training workshops for Campuses A & B and subsequent staff development and training workshop time spent with each teacher.

Table 13

CORRELATIONS BETWEEN TRAINING HOURS AND RANKINGS OF THE
TEACHERS AND INDICES OF USE OF CL/CR

(NON PARAMETRIC TESTS)

<u>CAMPUS A</u>
N=8

	USE OF CR
TRAINHRS	.012
RANKCOR	.359
RANKTR	.802**

* $p < .05$ ** $p < .01$

<u>CAMPUS B</u>
N=12

	PERCENTAGE OF CLASS-TIME USED DOING CL
TRAINHRS	.066
RANKCOR	.229
RANKTR	.349

<u>CAMPUS C</u>
N=10

	PERCENTAGE OF CLASS-TIME USED DOING CL
TRAINHRS	.089
RANKCOR	.180
RANKTR	-.276

Table 14

INTERVIEW DATA -- YEAR ONE

CONFLICT RESOLUTION AT CAMPUS A
(N=34)

Q. Overall, did you find the lessons to be useful in your everyday life at ...

	Yes	No	No response
HOME	74% (n=25)	26% (n=9)	_____
SCHOOL	71% (n=24)	18% (n=6)	11% (n=4)
ON THE JOB (n=26)	54% (n=14)	42% (n=11)	4% (n=1)
IN THE STREET	62% (n=21)	24% (n=8)	14% (n=5)

Table 15

INTERVIEW DATA -- YEAR ONE

CONFLICT RESOLUTION AT CAMPUS A
(N=34)

Q. What things did you like about the lessons?

                                                    Percent responding

Helpful to know how to look at conflicts/   47% (n=16)
handle them

Role-playing   35% (n=12)

Hear about others'/   26% (n=9)
talk about own conflicts

Q. What things did you dislike about the lessons?

                                                    Percent responding

Disliked nothing about the lessons   42% (n=14)

Repetitive/too long/took place too often   26% (n=9)

People in class argued about others'   6% (n=2)

Difficult to talk about old conflicts/self   6% (n=2)

Can't use CR due to society   3% (n=1)

Lectures   3% (n=1)
feelings/attitudes

Table 16

INTERVIEW DATA -- YEAR ONE

CONFLICT RESOLUTION AT CAMPUS A
(N=34)

Q. How could the lessons have been more useful to you personally? Please make any suggestions that would help us in improving the lessons.

	Percent responding
Good as it was/no changes	12% (n=4)
Different lesson presentation formats (e.g. films, video)	38% (n=13)
More role-playing	29% (n=10)
Dealing with specific conflict issues/problems	15% (n=5)
No suggestions	15% (n=5)

Table 17

INTERVIEW DATA -- YEAR ONE

CONFLICT RESOLUTION AT CAMPUS B
(N=34)

Q. Overall, did you find the lessons to be useful in your everyday life at ...

	Yes	No	No response
HOME	71% (n=24)	29% (n=10)	_____
SCHOOL	65% (n=22)	29% (n=10)	6% (n=2)
ON THE JOB (n=26)	50% (n=13)	42% (n=11)	8% (n=2)
IN THE STREET	29% (n=10)	59% (n=20)	12% (n=4)

Table 18

CONFLICT RESOLUTION AT CAMPUS B
(N=34)

Q. What things did you like about the lessons?

	Percent responding
Liked it in general	26% (n=9)
Knowing how to handle conflicts	24% (n=8)
Talking about own/hearing about others' feelings and conflicts	24% (n=8)

Q. What things did you dislike about the lessons?

	Percent responding
Didn't dislike anything	26% (n=9)
Classes too repetitive/boring	32% (n=11)
Class mate's negative attitude and/or participation	21% (n=7)
Classes were too unrealistic	12% (n=4)

Table 19

INTERVIEW DATA -- YEAR ONE

CONFLICT RESOLUTION AT CAMPUS B
(N=34)

Q. How could the lessons have been more useful for you
personally? Please make any suggestions that would help us
in improving the lessons.

	Percent responding
More CR topics in general	29% (n=10)
Do topics important for city kids: Drugs, rape crime, Family problems	24% (n=8)
More role-playing	15% (n=5)

Table 20

INTERVIEW DATA -- YEAR ONE

COOPERATIVE LEARNING AT CAMPUS C
(N=38)

Q. What kinds of things have you learned to do this year
that make you work better with other people?

	Percent responding
Listening to each other	42% (n=16)
Offering to explain	37% (n=14)
Asking for help	32% (n=12)
Criticizing ideas, not people	26% (n=10)

Table 21

INTERVIEW DATA -- YEAR ONE

COOPERATIVE LEARNING AT CAMPUS C
(N=38)

Q. What kinds of things do/did you like about it (CL)?

	Percent responding
Learned more	45% (n=17)
Liked the social contact	45% (n=17)
More fun	37% (n=14)
Liked helping/teaching other students	30% (n=11)
Had more chance to participate	26% (n=10)
Do not like CL at all	8% (n=3)

Q. What things did you dislike about it (CL)?

	Percent responding
One person had to do all the work	30% (n=11)
Others did not do the work	13% (n=5)
Covered less ground	13% (n=5)

Table 22

PERCENTAGES FOR THE NUMBER OF CR/CL TOPICS MENTIONED AS
DISCUSSED IN CLASS AND CONSIDERED USEFUL BY STUDENTS

Campus A (CR)
(N=49)

Number of Topics	None	1 to 5	6 to 10
Discussed (N=41)	2.4% (1)	24.4% (10)	73.2% (30)
Useful (N=38)	26.3% (10)	23.7% (9)	50.0% (19)

Pearson Correlation between Discussed & Useful=.749**

Campus B (CL)
(N=53)

Number of Topics	None	1 to 4	5 to 8
Used (N=42)	2.4% (1)	21.4% (9)	76.2% (32)
Useful (N=40)	10.0% (4)	32.5% (13)	57.5% (23)

Pearson Correlation between Used & Useful=.805**

Campus C (CL)
(N=75)

Number of Topics	None	1 to 4	5 to 8
Used (N=65)	4.6% (3)	26.3% (17)	69.2% (45)
Useful (N=57)	29.8% (17)	22.8% (13)	47.4% (27)

Pearson Correlation between Used & Useful=.778**

* $p<.05$; ** $p<.01$

Table 23

COOPERATIVE LEARNING

<u>Percentages and Numbers of Students reponding to</u>:

Q. When you were learning together in groups, did you learn more or less than usual?

	LESS	SAME	MORE
CAMPUS B	4.0% (N=2)	32.0% (N=16)	64.0% (N=32)
CAMPUS C	12.3% (N=9)	38.4% (N=28)	49.3% (N=36)

<u>Percentages and Numbers of Students responding to</u>:

Q. How did you like working together in groups where you have to work together cooperatively in order to do class assignments?

	DISLIKED IT	DIDN'T LIKE OR DISLIKE IT	LIKED IT
CAMPUS B	4.4% (N=2)	22.2% (N=10)	73.3% (N=33)
CAMPUS C	24.2% (N=16)	21.2% (N=14)	54.5% (N=36)

Table 24

PERCENTAGES AND NUMBERS OF STUDENTS REPORTING USING CR
TECHNIQUES IN VARIOUS SITUATIONS.

CAMPUS A

	Rarely	Occasionally	Frequently
Overall (N=45) (An average of the items below)	51.1% (23)	13.3% (6)	35.6% (16)
At Home (N=45)	40.1% (18)	24.4% (11)	35.6% (16)
At Work (N=44)	53.3% (23)	27.3% (12)	20.5% (9)
In School (N=45)	44.4% (20)	22.2% (10)	33.3% (15)
With Friends (N=43)	41.9% (18)	27.9% (12)	30.2% (13)

Table 25

CORRELATIONS BETWEEN USE OF CR IN SPECIFIC SITUATIONS AND
SELF-REPORTED IMPROVEMENT IN THOSE AREAS

Campus A
STUDENTS WHO SAID THEY WERE EXPOSED TO CR TRAINING
(N=30)

Improvement in Handling Conflicts with	Friends/Peers	Family	Other Employees	At Job
How Often Have You Used CR?				
With Friends/Peers	.418*	.569**	.481*	.191
At Home	.307	.498**	.390*	.205
At Work/Job	.538**	.594**	.436*	.300
At School	.649**	.732**	.591**	.322

* $p < .05$ ** $p < .01$

Table 26

MEANS ON INTERPERSONAL IMPROVEMENT ITEMS FOR ALL THREE
CAMPUSES

Effective Interaction/Groupwork

Scale: From 1 to 5.   HI=Better groupwork/interaction

Campus	Mean	N	Sd	CI(95%)
Campus A	3.54	56	.772	3.34 - 3.74
Campus B	3.60	65	.792	3.41 - 3.79
Campus C	3.54	80	.700	3.39 - 3.69

$F(2,200)=.173$, N.S.

Effective Handling of Conflicts

Scale: 1=No improvement; 2=Very little improvement;
       3=Some improvement; 4=Much improvement;
       5=Great improvement

Campus	Mean	N	Sd	CI(95%)
Campus A	3.33	55	1.114	3.03 - 3.63
Campus B	3.27	62	1.093	2.99 - 3.55
Campus C	3.27	80	1.132	3.13 - 3.44

$F(2,194)=.050$, N.S.

Lessening of Physical Fights

Scale: 1=Strongly Disagree; 2=Disagree; 3=Can't Decide;
       4=Agree; 5=Strongly Agree

HI=Less physical fights

Campus	Mean	N	Sd	CI(95%)
Campus A	4.00	56	1.236	3.67 - 4.33
Campus B	3.69	64	1.344	3.35 - 4.03
Campus C	3.45	78	1.251	3.16 - 3.86

$F(2,195)=3.03$, $p=.051$

Contrast between Campus A and Campus C is significant,
$t(132)=2.53$, $P<.05$. Constrasts between Campus B and C, and
between Campus A and B are not significant.

Table 27

MEANS ON INTERPERSONAL IMPROVEMENT ITEMS FOR DIFFERENT
ETHNIC AND GENDER GROUPS (All three Campuses)

Scale: HI=More/better interpersonal improvement.

Effective Interaction/Groupwork

Group	Mean	N	Sd	CI(95%)
Black Males	3.36	40	.755	3.13 - 3.59
Black Females	3.45	39	.800	3.20 - 3.70
Hispanic Males	3.76	35	.694	3.53 - 3.99
Hispanic Females	3.60	39	.698	3.38 - 3.82

$F(3,149)=2.12$, N.S.

Effective Handling of Conflicts

Group	Mean	N	Sd	CI(95%)
Black Males	3.05	40	1.086	2.70-3.40
Black Females	3.03	37	1.169	2.64-3.41
Hispanic Males	3.26	34	1.030	2.90-3.62
Hispanic Females	3.43	39	.930	3.13-3.73

$F(3,146)=1.24$, N.S.

Lessening of Physical Fights

Group	Mean	N	Sd	CI(95%)
Black Males	3.12	40	1.090	2.78-3.46
Black Females	4.15	39	1.204	3.77-4.53
Hispanic Males	3.49	35	1.442	3.01-3.97
Hispanic Females	4.05	38	1.229	3.66-4.44

$F(3,146)=5.62$, $p<.01$

Contrast between Black Females and Black Males is
significant, $t(77)=3.68$, $p<.01$. Contrast between Hispanic
Males and Hispanic Females comes near significance,
$t(71)=1.95$, $p=.053$. The difference between Hispanic Males
and Black Males is not significant.

Table 28

MULTIPLE REGRESSION RESULTS FOR PREDICTING INTERPERSONAL
IMPROVEMENT ITEMS

Campus A (CR)
(N=28)

Dependent Variable: Effective Interaction/Groupwork

Independent Variables	Beta	Sig	
USE OF CR BY STUDENTS	.373	.034	OVERALL F: 6.06 SIG OF F : .007 OVERALL R2: .326
CR TRAINING EXPOSURE	.373	.034	ADJ R2 : .272 MULTIPLE R: .572

Dependent Variable: Effective Handling of Conflicts

Independent Variables	Beta	Sig	
USE OF CR BY STUDENTS	.553	.003	OVERALL F: 5.98 SIG OF F : .008 OVERALL R2: .324
CR TRAINING EXPOSURE	.071	.676	ADJ R2 : .270 MULTIPLE R: .569

Dependent Variable: Lessening of Physical Fights

Independent Variables	Beta	Sig	
USE OF CR BY STUDENTS	.199	.190	OVERALL F: .325 SIG OF F : .275 OVERALL R2: .106
CR TRAINING EXPOSURE	.199	.463	ADJ R2 : .028 MULTIPLE R: .326

Table 29

MULTIPLE REGRESSION RESULTS FOR PREDICTING INTERPERSONAL
IMPROVEMENT ITEMS

Campus B (CL)
(N=37)

<u>Dependent Variable</u>: Effective Interaction/Groupwork

Independent Variables	Beta	Sig		
CL USEFUL	.268	.095	OVERALL F:	5.27
			SIG OF F :	.01
CL TRAINING EXPOSURE	.336	.038	OVERALL R2:	.227
			ADJ R2 :	.192
			MULTIPLE R:	.487

<u>Dependent Variable</u>: Effective Handling of Conflicts

Independent Variables	Beta	Sig		
CL USEFUL	-.244	.123	OVERALL F:	6.16
			SIG OF F :	.005
CL TRAINING EXPOSURE	.530	.050	OVERALL R2:	.266
			ADJ R2 :	.223
			MULTIPLE R:	.516

<u>Dependent Variable</u>: Lessening of Physical Fights

Independent Variables	Beta	Sig		
CL USEFUL	-.087	.647	OVERALL F:	4.36
			SIG OF F :	.02
CL TRAINING EXPOSURE	.534	.008	OVERALL R2:	.259
			ADJ R2 :	.199
			MULTIPLE R:	.509

Table 30

MULTIPLE REGRESSION RESULTS FOR PREDICTING INTERPERSONAL
IMPROVEMENT ITEMS

Campus C (CL)
(N=37)

Dependent Variable: Effective Interaction/Groupwork

Independent Variables	Beta	Sig		
CL USEFUL	.431	.001	OVERALL F:	9.14
			SIG OF F :	.001
CL TRAINING EXPOSURE	-.303	.017	OVERALL R2:	.276
			ADJ R2 :	.246
			MULTIPLE R:	.525

Dependent Variable: Effective Handling of Conflicts

Independent Variables	Beta	Sig		
CL USEFUL	.276	.052	OVERALL F:	2.08
			SIG OF F :	.136
CL TRAINING EXPOSURE	.055	.691	OVERALL R2:	.080
			ADJ R2 :	.041
			MULTIPLE R:	.282

Dependent Variable: Lessening of Physical fights

Independent Variables	Beta	Sig		
CL USEFUL	.583	.001	OVERALL F:	8.56
			SIG OF F :	.001
CL TRAINING EXPOSURE	-.127	.415	OVERALL R2:	.388
			ADJ R2 :	.343
			MULTIPLE R:	.623

APPENDIX A

RELIABILITIES OF THE MULTIPLE ITEM SCALES

TEACHER DATA

COOPERATIVE LEARNING	ALPHA	N
Student Psychological Improvement	.802	33
Positive Peer Relations	.640	33
Non Conducive to Learning	.864	30
Lack of Skill/Support	.579	30

CONFLICT RESOLUTION	ALPHA	N
Positive Socio-Emotional Influence	.964	30
Applicability of CR	.953	29
Personal Value of CR	.934	32
Disruptive/No Support	.838	29

STUDENT DATA

	ALPHA	N
Effective Groupwork/Interaction	.755	188
Effective Handling of Conflicts	.865	156

APPENDIX B
TABLE 1

TEACHER DATA

SCALES FOR EFFECTS OF COOPERATIVE LEARNING

1=NOT EFFECTIVE; 2=A LITTLE EFFECTIVE; 3=SOMEWHAT EFFECTIVE;
4=GENERALLY EFFECTIVE; 5=VERY MUCH EFFECTIVE

Many educators feel that cooperative learning has numerous
student benefits and effects. Please read the following
statements and rate the effects of cooperative learning for
your students in the following areas.

STUDENT PSYCHOLOGICAL IMPROVEMENT

ITEM	FACTOR LOADING
Increasing student responsibility	.75447
Developing student confidence	.72132
Developing perspective-taking skills	.66384
Increasing student self-esteem	.58327

ALPHA=.802   N=33

POSITIVE PEER RELATIONS

ITEM	FACTOR LOADING
Promoting positive peer relationships	.83426
Promoting positive social interaction	.68667
Increasing class participation	.68278

ALPHA=.640   N=33

TABLE 1 CONT.

PROBLEMS WITH CL

Please think of your own teaching practices. What problems
or negative effects are associated with the use of
cooperative learning

1=NOT A PROBLEM; 2=A BIT OF A PROBLEM;
3=SOMEWHAT OF A PROBLEM; 4=A DEFINITE PROBLEM;
5=VERY MUCH A PROBLEM

NON CONDUCIVE TO LEARNING

ITEM	FACTOR LOADING
Students did not learn as much	.90435
Good students were held back	.89953
It wastes time	.81730

ALPHA=.864   N=30

LACK OF SKILL/SUPPORT

ITEM	FACTOR LOADING
Spend too much time with lesson preparation	.74847
Students did not like it	.68817
No support to use CL	.68302
Did not feel skillful	.62822

ALPHA=.579   N=30

APPENDIX B
TABLE 2

TEACHER DATA

SCALES FOR EFFECTS OF CONFLICT RESOLUTION

Many educators feel that conflict resolution training has
numnerous student benefits and effects. Please read the
following statements and rate the effects of conflict
resolution training for your students in the following
areas.

1=NOT EFFECTIVE   2=A LITTLE EFFECTIVE   3=SOMEWHAT EFFECTIVE
4=GENERALLY EFFECTIVE   5=VERY MUCH EFFECTIVE

POSITIVE SOCIO-EMOTIONAL INFLUENCE

ITEM	FACTOR LOADING
Positive student/teacher interaction	.91858
Increasing student self-esteem	.91276
Promoting positive social interaction	.90818
Developing student confidence	.89464
Decreasing student violence	.87806
Promo constructive conflict resolution	.86648
Promo positive peer relationships	.85836
Developing emotional maturity	.85410
Developing perspective-taking skills	.77109

ALPHA=.964   N=30

APPLICABILITY OF CR

Please rate the usefulness and applicability of the conflict
resolution training lessons in the everyday lives of you
students in the following areas.

1=NOT VALUABLE   2=LITTLE VALUE   3=MODERATELY VALUABLE
4=QUITE VALUABLE   5=VERY VALUABLE

ITEM	FACTOR LOADING
At school	.88105
In the workplace	.87700
In "family group"	.85175
In "Core group"	.84648
Relationships with peers	.83937
Other classes (not CR)	.80631
Neighborhood around Satellite	.68962

Alpha=.953   N=29

TABLE 2 CONT.

PERSONAL VALUE OF CR

Please rate the usefulness and applicability of the conflict
resolution training you have received in your own
experience.

1=NOT VALUABLE   2=LITTLE VALUE   3=MODERATELY VALUABLE
4=QUITE VALUABLE   5=VERY VALUABLE

ITEM	FACTOR LOADING
Relationship with students	.92581
Teaching "family group"	.90952
Dealing with student dicipline	.88276
Relationship with colleagues	.87168
Teaching classes (not CR)	.84970
Personal relationships	.79156

ALPHA=.934   N=32

PROBLEMS WITH CR

Please think of your own teaching practices. What problems
or negative effects are associated with the use of conflict
resolution

1=NOT A PROBLEM; 2=A BIT OF A PROBLEM;
3=SOMEWHAT OF A PROBLEM; 4=A DEFINITE PROBLEM;
5=VERY MUCH A PROBLEM

PHILOSOPHICAL/PSYCHOLOGICAL

ITEM	FACTOR LOADING
Focuses too little on social causes	.91637
Stirs up too much emotion	.78933
No support to teach CR	.75699
Requires too much psychological expertise of the teacher	.67826

ALPHA=.838   N=29

APPENDIX C

RANKING OF EXPERTISE OF TEACHERS

Each Campus Coordinator and Trainer was provided with a sheet of paper with names of all the teachers at that campus. The following instructions were provided:

Please read the list of teachers at your particular campus. Rank the teachers according to their facility and expertise with the particular intervention your used in the workshops and staff development you conducted during the research project. Use "1" for the teacher with the most facility and expertise and subsequently higher numbers for less facility and expertise. Use the line to the right of the teacher's name to mark the rank number. Please do not duplicate rankings by marking two or more teachers with the same rank number. If you had no contact with a particular teacher mark the line with "N/A". If the teacher was resistant to the intervention, staff development and workshops, mark the line with "R".

APPENDIX D
TABLE 1

STUDENT DATA
INTERPERSONAL IMPROVEMENT

EFFECTIVE SOCIAL INTERACTION/GROUPWORK

Q. How strongly do you agree with the following statements.

1=STRONGLY DISAGREE; 2=DISAGREE; 3=CAN'T DECIDE;
4=AGREE; 5=STRONGLY AGREE

ITEMS

During the past school year I have learned
      to work more effectively in groups
Improvement in working with others
      in groups
I have learned to put myself in others'
      shoes when I disagree with someone
When I am in an argument I summarize their
      point of view so they will know that
      I understand their side
I have learned to handle conflicts and
      arguments more productively this
      past year.

ALPHA=.755   N=188

TABLE 1 CONT.

HANDLE CONFLICTS EFFECTIVELY

Q. Please think of the way you handle arguments (conflicts), and about how you get along and work with others in groups. Please rate your improvement in the following areas:

1=NO IMPROVEMENT; 2=VERY LITTLE IMPROVEMENT;
3=SOME IMPROVEMENT; 4=MUCH IMPROVEMENT;
5=GREAT IMPROVEMENT

ITEMS

Handling conflicts or arguments with friends
     or peers
Handling conflicts/arguments with my family
Working with other employees on the job
Handling conflicts/arguments on the job

ALPHA=.865   N=156

LESSENING OF PHYSICAL FIGHTS

1=STRONGLY AGREE; 2=AGREE; 3=CAN'T DECIDE;
4=DISAGREE; 5=STRONGLY DISAGREE

During the past year, I got into physical
     fights more frequently

APPENDIX D
TABLE 2
STUDENT DATA
INTERVENTION QUESTIONNAIRE

CONFLICT RESOLUTION

        Students were asked to circle YES or NO to whether the
following topics were discussed in their classes. If the
topics were discussed, the students had to circle YES or NO
to whether the topics were useful to them.

ACTIVE LISTENING. Checking to see whether you understand
the other person correctly and whether he/she understands
you.

"I" MESSAGES. Telling the other person what you think, not
reading other person's mind and telligr him/her what he/she
thinks.

"NEEDS" VS. "POSITIONS". Talking about the needs,
interests, and feelings of you and the other person rather
than of your opposing positions.

NEGOTIABLE VS. NON-NEGOTIABLE **CONFLICTS**. What kinds of
conflicts should be avoided because there are no good
solutions; what kinds of styles do different people have.

INDIVIDUAL CONFLICT STYLE. How do you personally tend to
deal with most conflicts, what kinds of conflict styles do
different people have.

PUTTING YOURSELF IN THE OTHER PEOPLE'S SHOES. How other
people's view points might be different from yours, how to
understand the other person's point of view.

ANGER AND VIOLENCE. How anger affects your ability to
handle conflict.

REFRAMING THE ISSUES. Talking about the issues in other
ways to find more common ground between yourself and the
other person.

CRITICIZE IDEAS AND NOT PEOPLE. Criticize what people say
rather than criticizing who or what they are.

"WIN-WIN" SOLUTIONS. To conflict versus compromises.
Finding solutions where everyone gets what they need, rather
than solutions where everyone gets some of what they need.

TABLE 2 CONT.

For use of Conflict Resolution:

Q. How often have you used what you have learned about handling conflict:

At Home, At Work/Job, At School, With Friends.

SCALE: 1=NEVER; 2=SELDOM; 3=OCCASIONALLY;
         4=FREQUENTLY; 5=ALWAYS

APPENDIX D
TABLE 3

STUDENT DATA
INTERVENTION QUESTIONNAIRE

COOPERATIVE LEARNING

Students were asked to circle YES or NO to whether the following topics were discussed in their classes. If the topics were discussed, the students had to circle YES or NO to whether the topics were useful to them.

SHARING IDEAS together through group discussion.

SHARING BONUS POINTS if we learned the material well.

TEACHING OTHER STUDENTS.

LEARNING HOW TO WORK TOGETHER as a group.

EVALUATING how our group worked together.

DIVIDING THE LESSON so that each student had to learn a piece of it and to teach it to the other students.

HAVING DIFFERENT ROLES in a group such as "reader", "writer", "encourager", "summarizer".

GROUP MUST ALL AGREE on answers. One answer sheet, all sign answer sheet, all write down one answer.

For liking of Cooperative Learning:

Q. How did you like working in groups where you have to work together cooperatively in order to do class assignments?

SCALE:
1=DISLIKED IT VERY MUCH; 2=DISLIKED IT
3=DIDN'T LIKE OR DISLIKE IT; 4=LIKED IT; 5=LIKED IT A LOT

For learning in cooperative groups:

Q. When you were learning together in groups, did you learn more or less than usual?

SCALE:
1=MUCH MORE; 2=MORE; 3=ABOUT THE SAME; 4=LESS; 5=MUCH LESS.
3=LIKED IT;

Figure 1

RATE OF RETURN
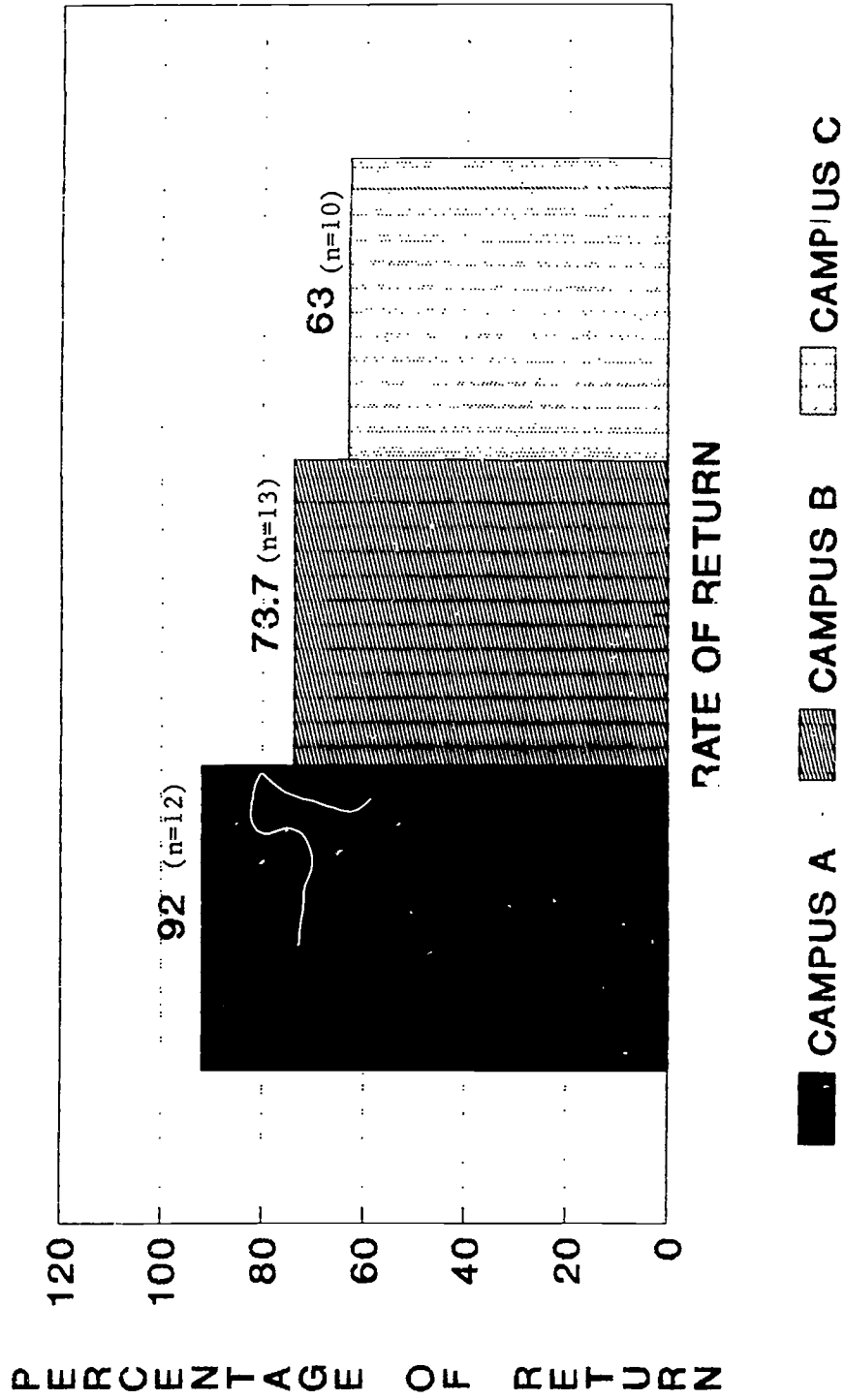## QUESTIONNAIRES FROM TEACHERS

PERCENTAGE OF RETURN

CAMPUS A   CAMPUS B   CAMPUS C

92 (n=12)   73.7 (n=13)   63 (n=10)

RATE OF RETURN

116

FIGURE 2

TEACHER CHARACTERISTICS
ETHNICITY AND GENDER (YEAR 2)
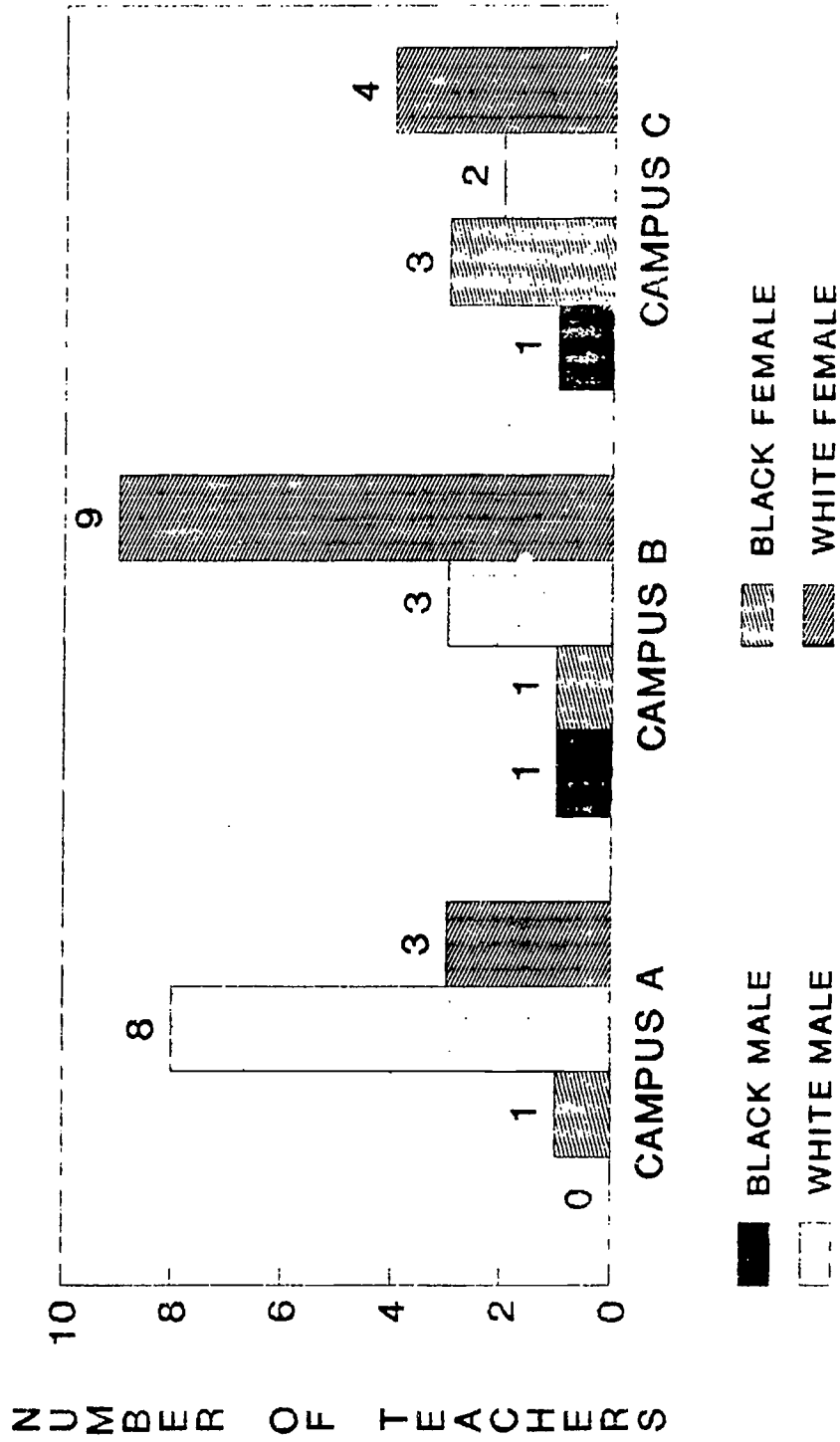
TEACHER CHARACTERISTICS
GENDER AND ETHNICITY (YEAR 2)

FIGURE 3

ETHNICITY

WHITES 81%
29

BLACKS 19%
7

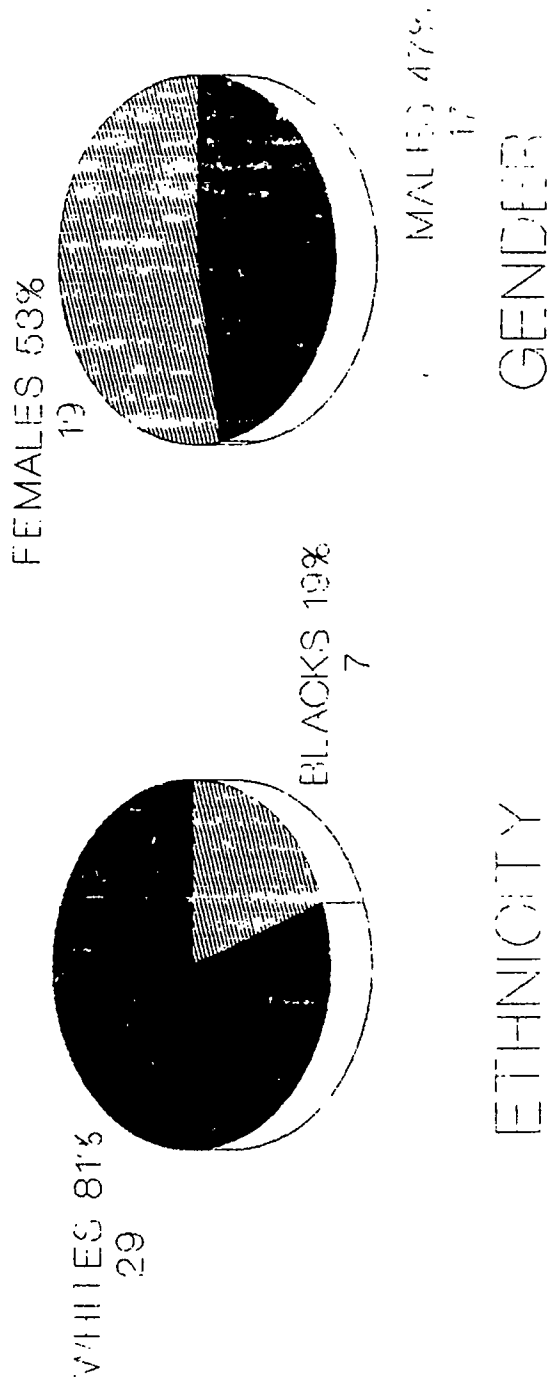GENDER

FEMALES 53%
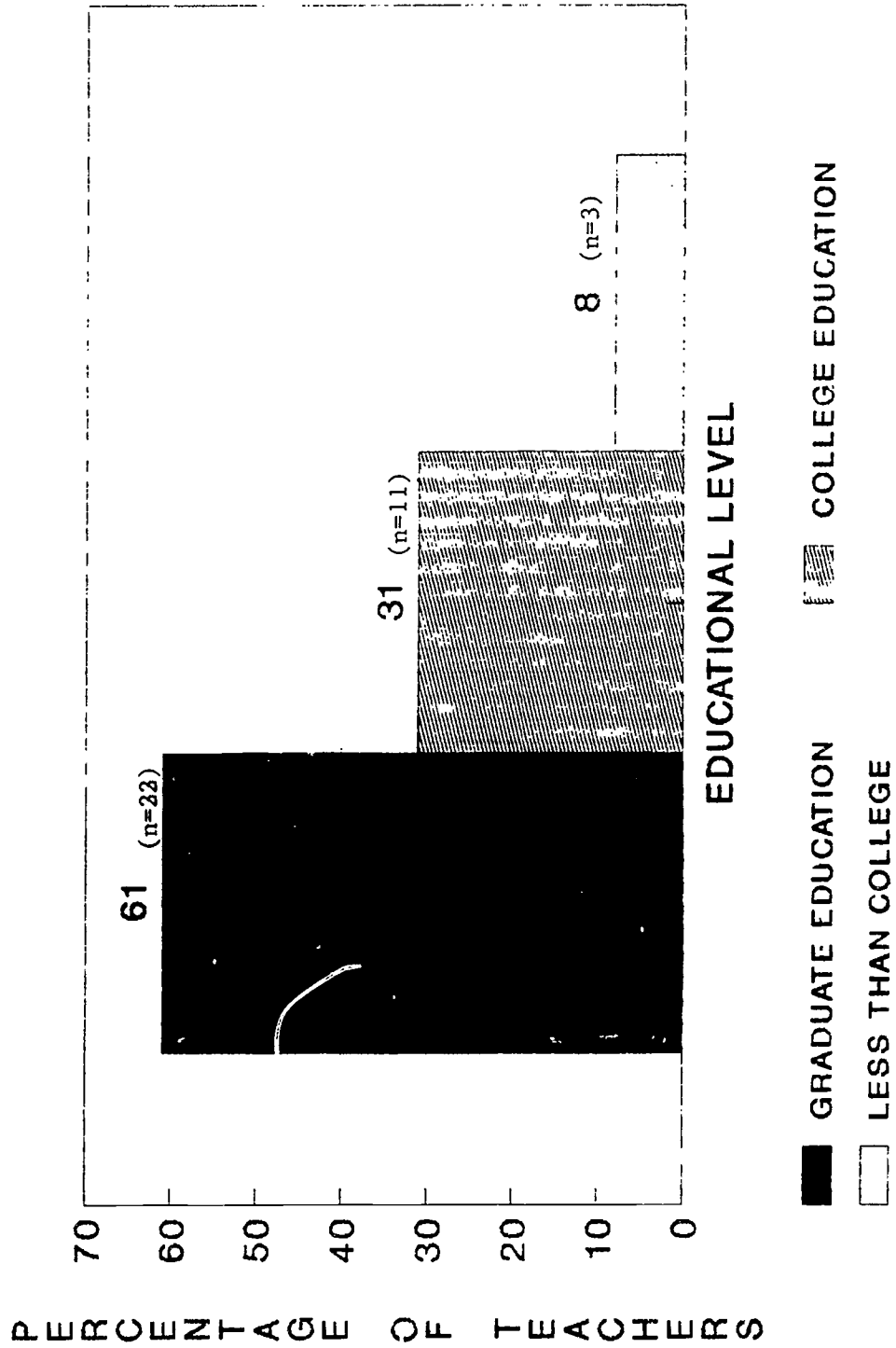19

MALES 47%
17

FIGURE 4

TEACHERS' EDUCATION

122

121

FIGURE 5
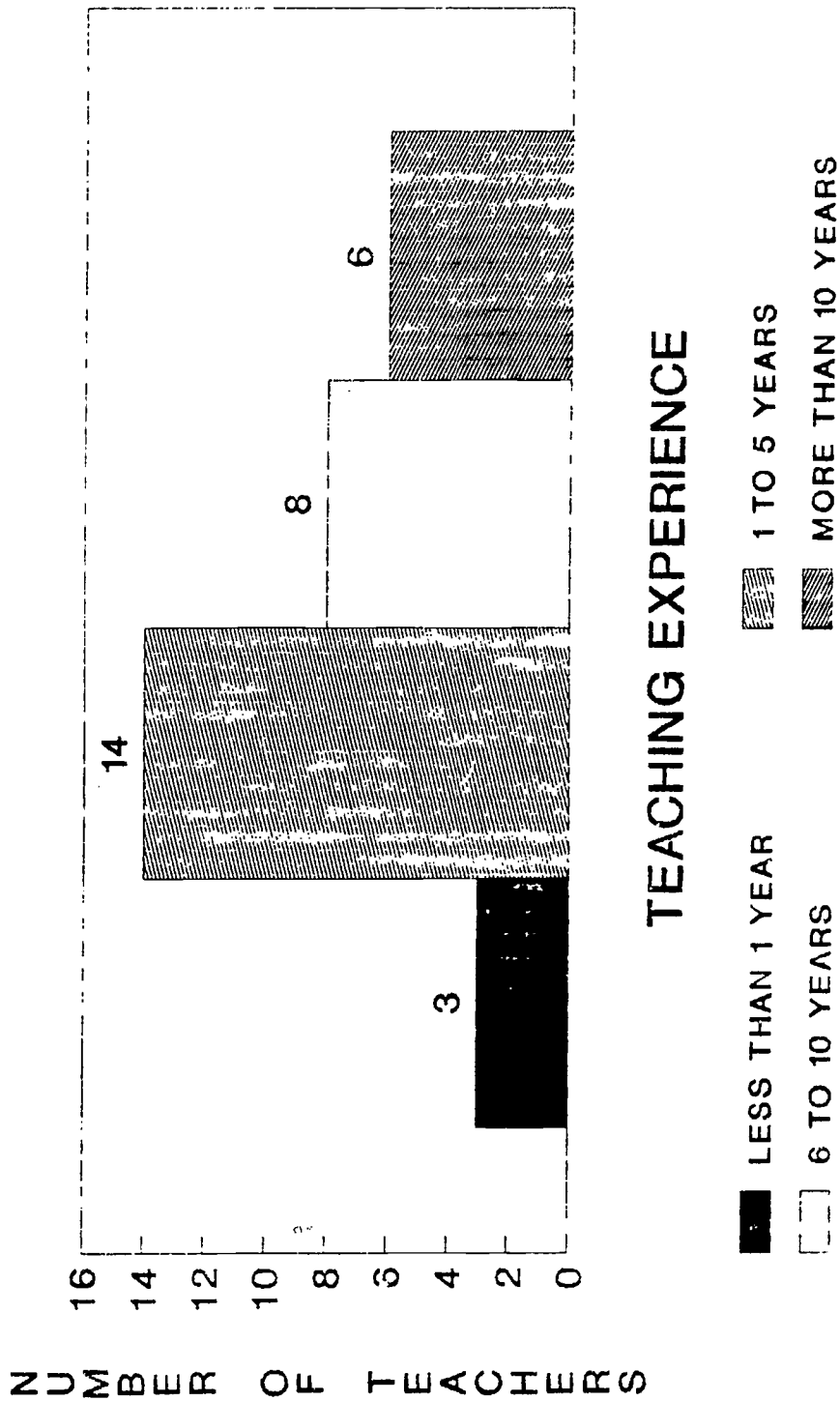
TEACHERS' EXPERIENCE
AT ALTERNATIVE HIGH

FIGURE 6

TEACHER REPORTS CL TECHNIQUES (YEAR TWO) USED IN CLASS PER MONTH (CAMPUS C)
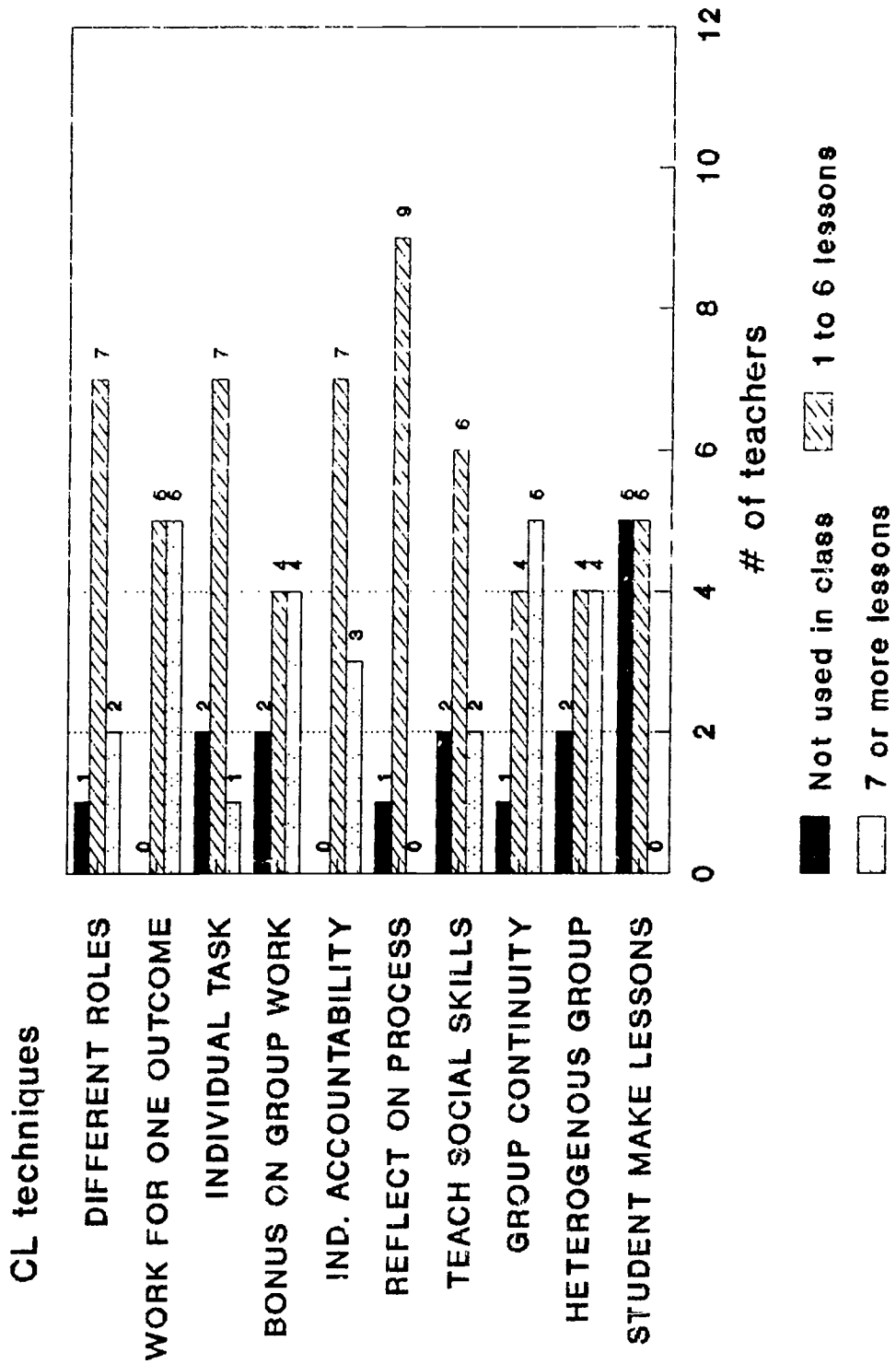
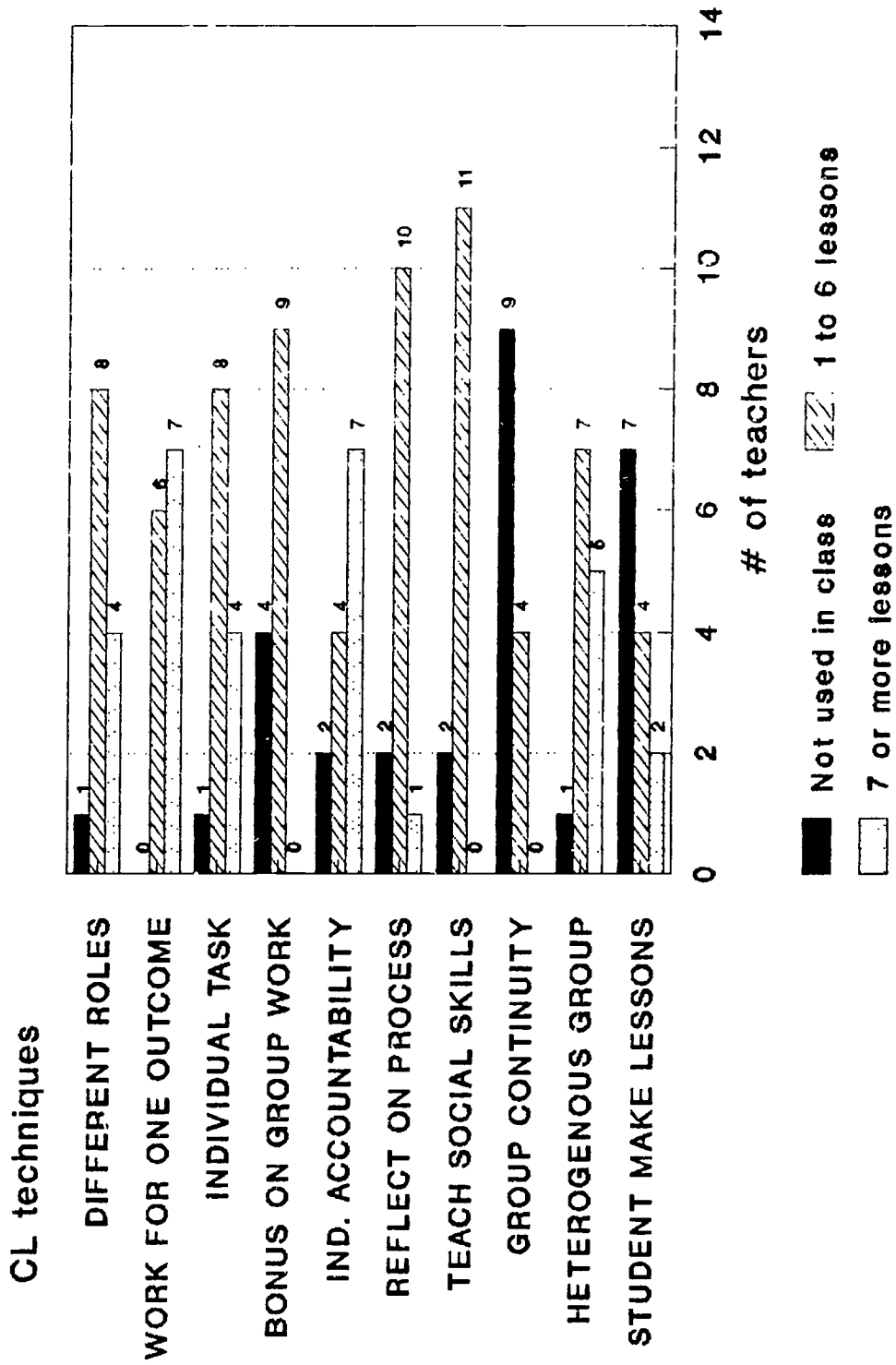CL techniques

126

FIGURE 7

TEACHER REPORTS CL TECHNIQUES (YEAR TWO) USED IN CLASS PER MONTH (CAMPUS B)

128

FIGURE 8-A

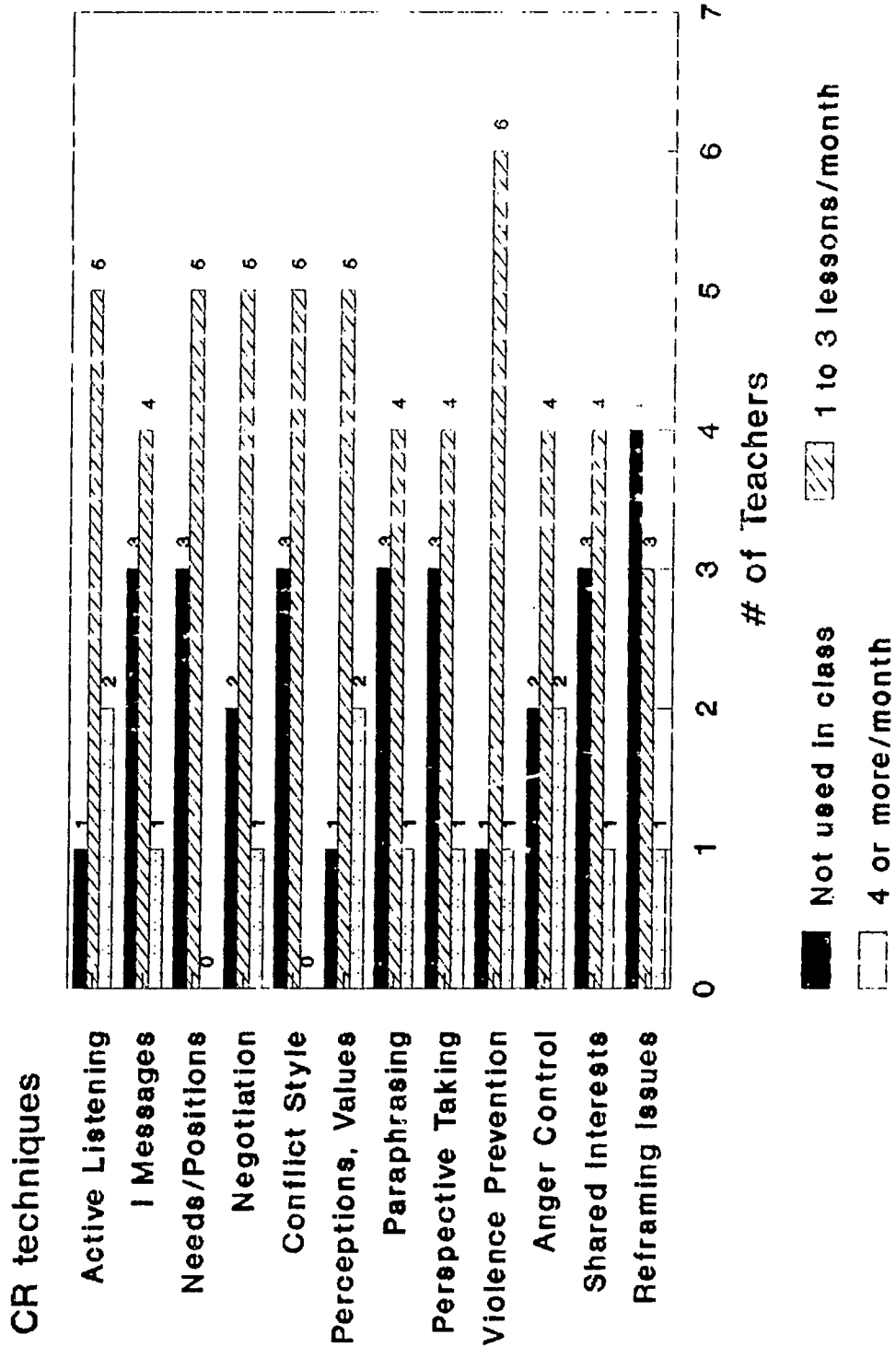# TEACHER REPORTS OF CR LESSONS (Year Two) USED IN CLASS PER MONTH (CAMPUS A)

CR techniques

Not used in class   **1 to 3 lessons/month**

4 or more/month

FIGURE 8-B

TEACHER REPORTS OF CR LESSONS (Year Two) USED IN CLASS PER MONTH (CAMPUS B)

131

132
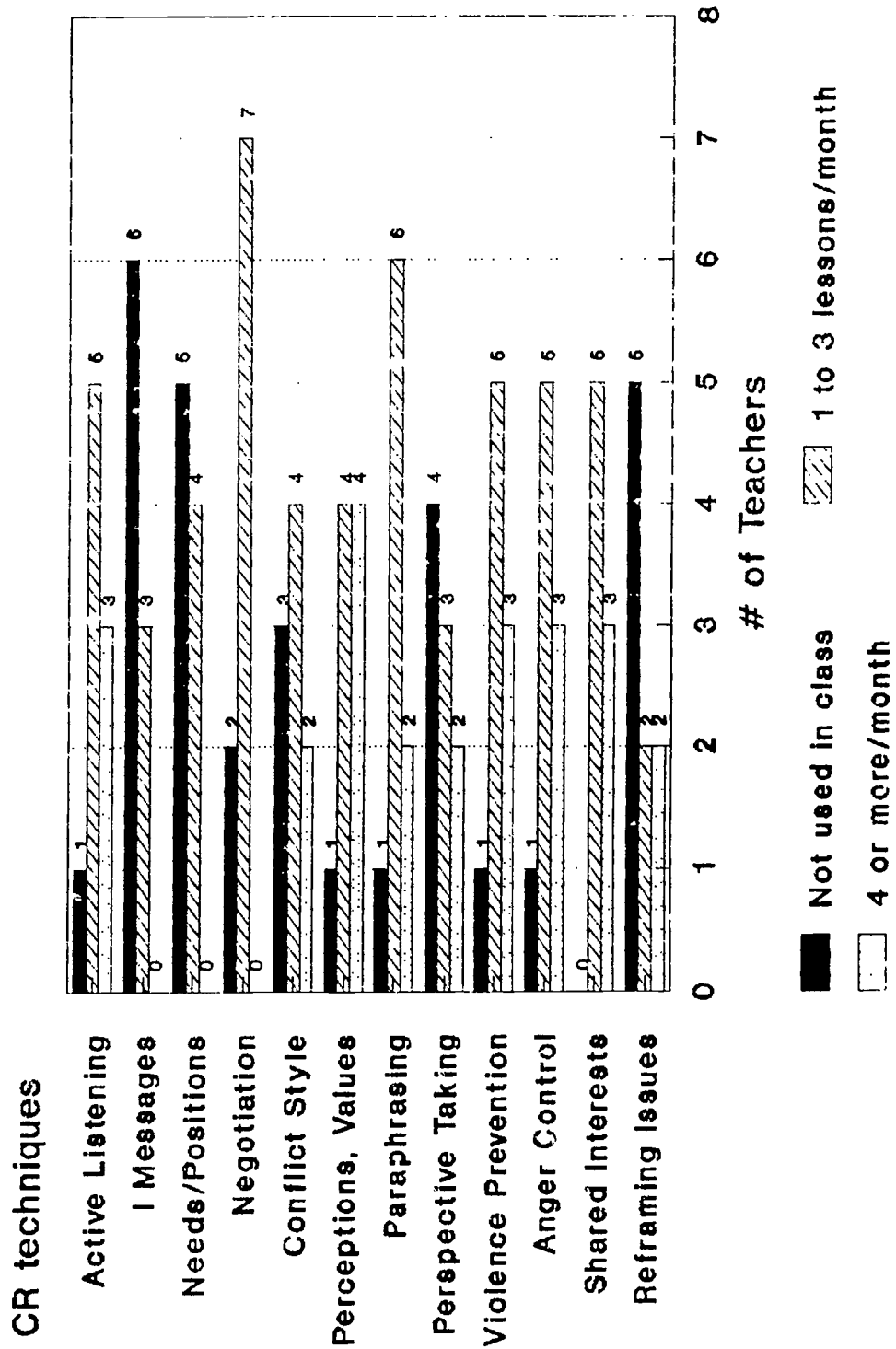
FIGURE 9

STUDENT REPORTS OF CR TECHNIQUES USED IN CLASS (Campus A)

CR techniques

Technique	Not used in class	Not useful	Useful
Active Listening	3	5	23
I Messages	14	3	19
Needs/Positions	9	5	18
Negotiation	9	4	21
Conflict Style	8	6	18
Other's Shoes	7	3	22
Anger/Violence	7	6	20
Reframe Issues	11	4	19
Criticize	13	2	18
WinWin Solutions	14	2	16

# of students

Not used in class ▓ Not useful □ Useful
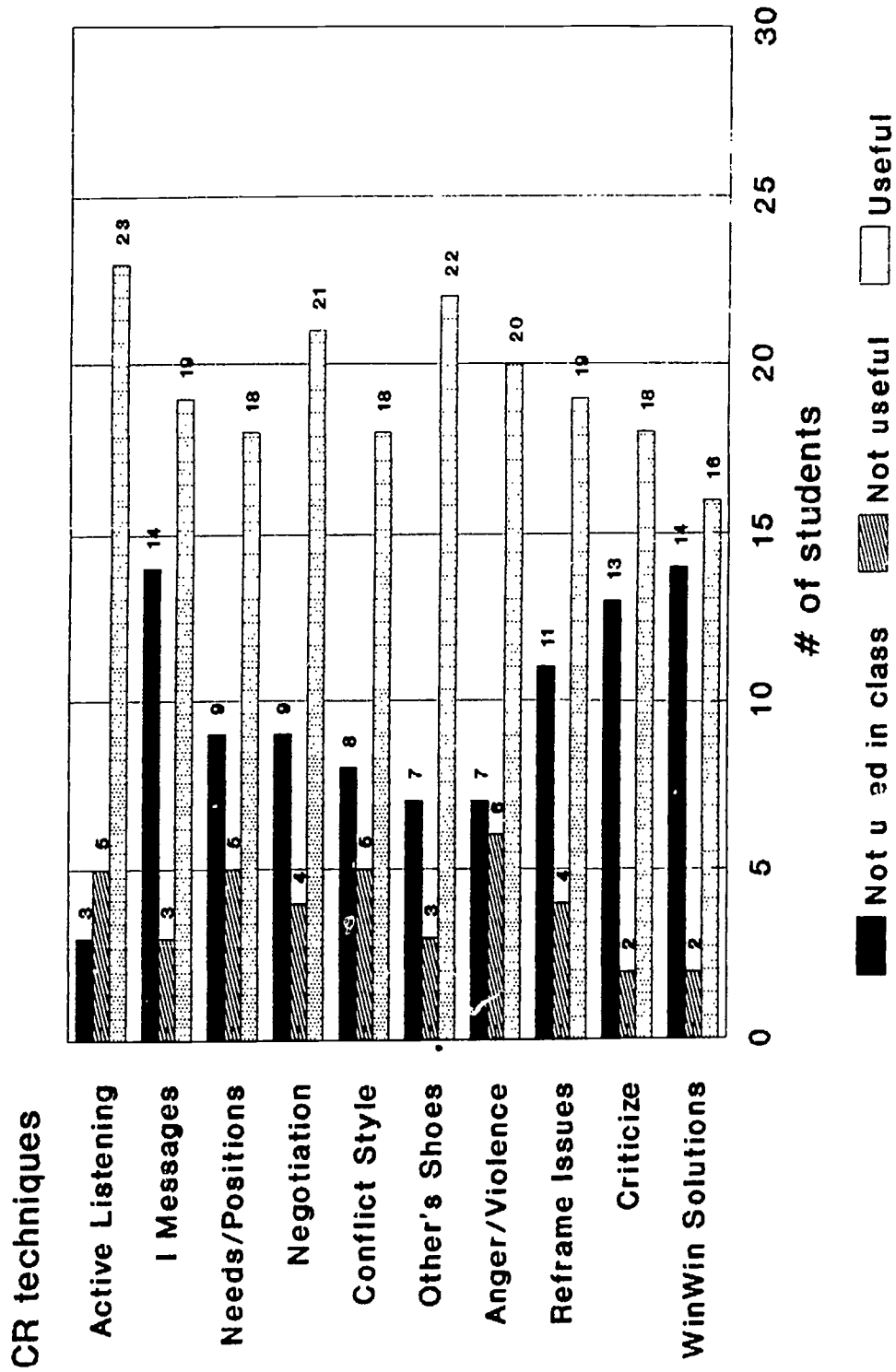
FIGURE 10

STUDENT REPORTS OF CL TECHNIQUES USED IN CLASS (Campus B)

CL techniques:

Sharing Ideas

Sharing Bonus Points

Teaching Students

Work Together

Evaluate Work

Divide Work

Different Roles

Group Agreement

# of students

■ Not used in class   ▨ Not useful   ▢ Useful

Sharing Ideas: 5, 6, 26
Sharing Bonus Points: 9, 0, 30
Teaching Students: 10, 2, 28
Work Together: 8, 0, 27
Evaluate Work: 7, 5, 24
Divide Work: 13, 6, 20
Different Roles: 8, 1, 29
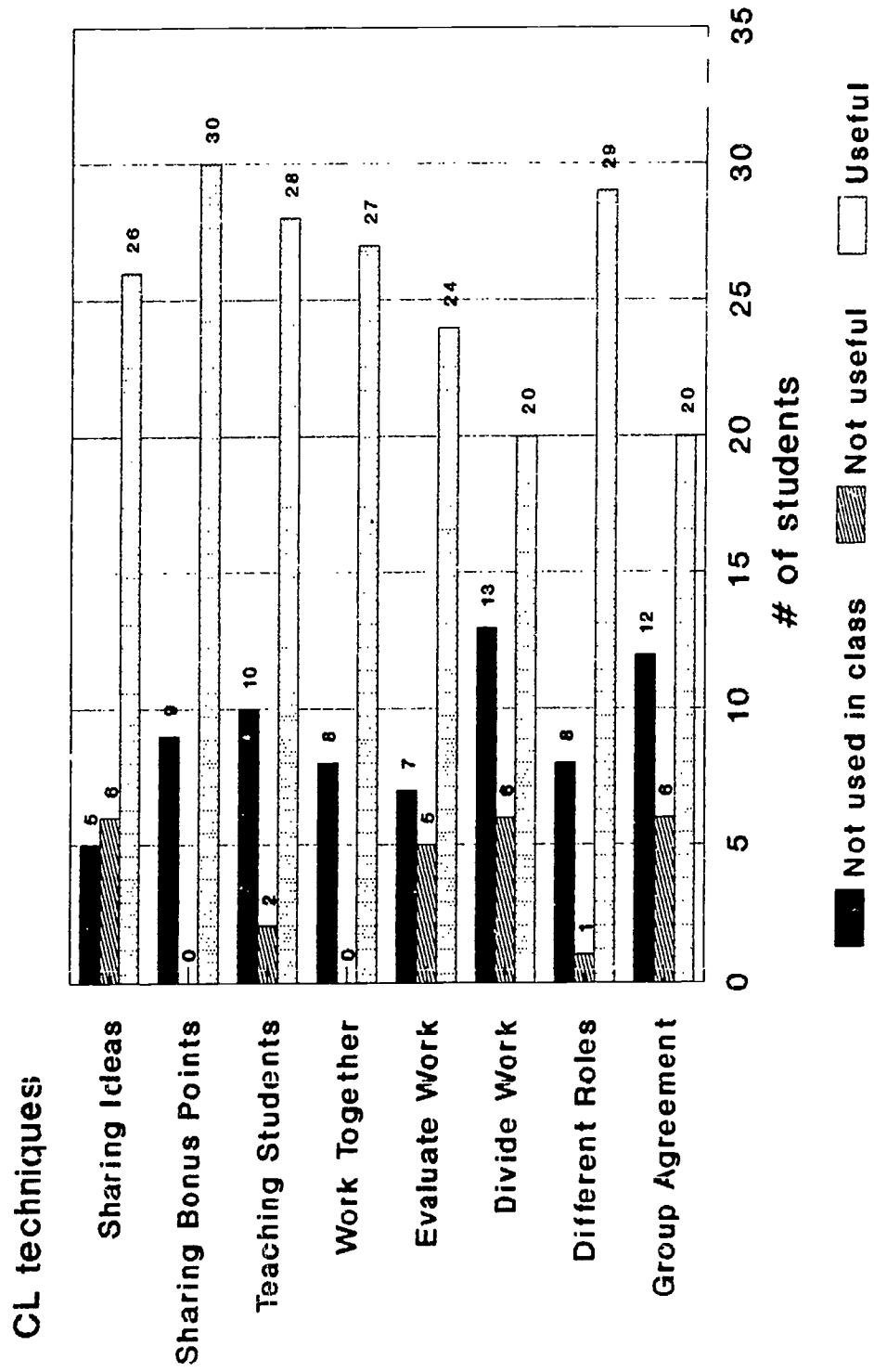Group Agreement: 12, 6, 20

135

136

FIGURE 11

STUDENT REPORTS OF CL TECHNIQUES
USED IN CLASS (Campus C)

CL techniques

Sharing Ideas

Sharing Bonus Points

Teaching Students

Work Together

Evaluate Work

Divide Work

Different Roles

Group Agreement

# of students

■ Not used in class   ▨ Not useful   ☐ Useful

137

138