

**THE EFFECTS OF CONFLICT MEDIATION TRAINING  
ON ATTITUDES TOWARD CONFLICT AND INTERPERSONAL  
PROBLEM-SOLVING STRATEGIES  
OF MIDDLE SCHOOL STUDENTS**

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ABSTRACT

Numerous research studies have documented the benefits of a conflict mediation program as one component of a school-based violence prevention program. The major purpose of this study was to determine the possible effects of participation in a conflict mediation training program and serving as a peer mediator on the attitude a student has toward conflict and the interpersonal problem-solving strategies employed by a student. Secondly, this study sought to determine if students trained in conflict mediation skills assimilate the skills into their daily lives by examining attitudes and behaviors of students when faced with conflict outside the school environment.

The population in this study were 40 students enrolled in three grade levels in a middle school located in a suburban southwestern Virginia county . These students were named as possible mediators by the school faculty during the 1995-96 school term.

The independent variable in this study was training in conflict mediation skills. The dependent variables were attitude toward conflict as measured by the Thomas-Kilmann Conflict Mode Instrument and interpersonal problem-solving skills as measured by the Alternative Solutions Test. Parents and teachers of all participants documented observed behavior by completing the problem scales of

the Child Behavior Checklist and the Teacher's Response Form. Qualitative data were collected through the use of a focus group.

Measures of central tendency and standard deviations were calculated for the experimental and control groups for each dependent variable tested. Analysis of variance and t-tests were conducted to determine if significant effects were present following the treatment. All test results were analyzed at the  $p < .05$  level.

Based on the data analysis, it was concluded that students trained in conflict mediation chose to utilize collaboration and compromise when faced with situations of conflict whenever possible. The students receiving no training chose avoiding or accommodating most frequently. In addition, it was concluded that training affected the problem-solving skills of students by empowering them and encouraging the development of confidence in their abilities to solve problems. Students trained in conflict mediation generated a significantly greater number of solutions to problems presented than did the untrained students.

## Dedication

This work is dedicated to my mother and father whose love and faith have been a life-long inspiration. They taught me to believe that all things are possible.

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## Chapter 1

### Introduction

Fear of violence has become one of the greatest concerns for many in the arena of education (Kadel & Follman, 1993). The 28th Annual Gallup Poll identified fighting, violence and gangs, and a lack of discipline to be second only to drug abuse as the most serious problem facing today's schools (Elam, Rose, and Gallup, 1996). The Public Agenda Foundation reported that school safety and order were top priorities of parents responding to a survey (1994). Rarely can a newspaper be read without finding an article on the topic of youth violence.

While the United States has experienced a decrease in violent crime during the past three years, the Federal Bureau of Investigation (FBI) reported that the number of juvenile violent crime arrests was 67 percent higher in 1995 than those reported in 1986 (Snyder, 1997). Juveniles were involved in 32 percent of all robbery arrests, 23 percent of all weapon arrests, and 15 percent of the murder and aggravated assault arrests in 1995 (Snyder, 1997). Juveniles under age 15 were responsible for 30 percent of juvenile violent crime arrests in 1995 (Snyder, 1997). Arrests of juveniles for drug offenses increased 138 percent between 1991 and 1995 (Snyder, 1997). Students have often been witnesses or victims of conflict and violence in their community, school and home. The United States Department of Justice reported in 1994 that the rate of crimes committed against juveniles rose 24 percent between 1988 and 1992. The United States Department of Justice reported in 1993 that nearly three million crimes occur each year on or near school grounds (as cited in Goldstein & Conoley, 1997). Schools are mirrors of society; the violence occurring within

the schools across the nation is considered to be a reflection of the world today (Goldstein & Conoley, 1997).

No school is immune from violence. The National Education Association reported that every school day 160,000 students skip classes because they fear physical harm (Kadel & Follman, 1993). Learning cannot occur in a climate of fear and uncertainty. A student concerned for personal safety cannot concentrate on the business of education. Research suggests that students who feel afraid in school lose their trust in adults and are often those who commit acts of violence (Ditter, 1988). Educational professionals across the country are focusing on preventing school violence (Lupton-Smith, 1996). Metal detectors, security guards, video cameras, alternative education programs, and tough discipline policies have been implemented in many districts.

Conflict between students can occur anywhere; in the halls, the classroom, or the cafeteria. Unless handled appropriately and effectively, a routine conflict can easily escalate into a serious situation, requiring some form of administrative intervention. Whenever a conflict between students escalates to the point that administrative intervention is required, all parties involved lose. The student who is faced with consequences, the administrator who must spend valuable time on the matter, and the family who must face the issue at home - all become losers.

Traditionally, the school curriculum addresses conflict as it has occurred in history and literature, not as it occurs in the everyday life of a student. Many families do not instruct students on appropriate methods of handling conflict. (Johnson & Johnson, 1995). Often students know only two ways of settling disputes, fighting or giving up, neither of which provide a satisfactory resolution (Morse & Andrea, 1994). School personnel recognize that students must be taught not only that their actions have logical consequences, but also that instruction must be provided in acceptable alternatives to violence (Virginia

Association of School Superintendents, 1992).

Since the early 1980's, public schools have shown an increasing interest in providing instruction in conflict mediation skills (National Association for Mediation in Education, 1994) Schools have implemented a variety of programs based on the belief that training in conflict mediation would equip students with alternatives to violence. Evaluations of such program initiatives have generally been limited to an examination of the number of incidents of conflict. A limited amount of research has been done on the effects of participation in a conflict mediation training program. The studies of Ikram (1992), Lupton-Smith (1996), and Johnson (1996) have examined the effects on students of having participated in a training program.

Problem-free schools have never existed, but today's communities demand that educational professionals provide a safe and secure environment for students. Providing safe schools is a goal identified by the national government in Goals 2000 and endorsed by state governments and local education agencies (Ascher, 1994; Sautter, 1995). A school-based conflict mediation program has been identified by all levels of government and many national organizations as valuable in the effort to reduce violence in schools (Sautter, 1995; Virginia Association of School Superintendents, 1992). The purpose of this study was to examine the possible effects of participation in a conflict mediation training program and serving as a peer mediator on the attitude a student has toward violence and the interpersonal problem-solving skills of a student.

### Statement of the Problem

The number of conflict mediation programs existing in the schools of this country is rapidly increasing (Girard, 1994). Schools across the country are

implementing various forms of conflict mediation programs based on the expectation that such programs will aid efforts to reduce violence in the schools of their districts. This increase in interest corresponds to the rise of Alternative Dispute Resolution (ADR) efforts within the judicial system of this country and the development of community mediation centers, marking a move away from the traditional litigation model of settling conflicts between citizens (Trevaskis, 1994). Current research has focused primarily on the effectiveness of a school-based conflict mediation program in the battle to reduce violence in the schools of this nation. Findings have indicated that the presence of a conflict mediation program has contributed to a reduction in number of incidents of violence on school campuses (Lam, 1988; Clark County, 1996; Ohio Commission on Dispute Resolution, 1996; Metis Associates, 1988).

These studies, however, did not address the effects of participation in a conflict mediation training program on student participants. Numerous researchers have stated that additional quantitative research on the effects of conflict mediation training on attitude and behavior was needed (Lam, 1988; GAO, 1995; Johnson and Johnson, 1996). They have also indicated a need for careful consideration of research design and methodology. This study examined the possible effects of participation in a training program on the attitude toward conflict and the interpersonal problem-solving skills of student participants.

### Purpose

The major purpose of this study was to determine the possible effects of participation in a conflict mediation training program on the attitude a student has toward conflict and the interpersonal problem-solving strategies employed by a student. Secondly, this study sought to determine if students trained in conflict mediation skills assimilate the skills into their daily lives, by examining

attitudes and behavior when they are faced with conflict outside the school environment.

### Research Questions

1. Does participation in conflict mediation skills training affect the attitude a student has toward conflict?
2. Does participation in conflict mediation skills training affect the strategies a student employs in interpersonal problem-solving?
3. Are the skills taught in conflict mediation training assimilated by the students and used in situations other than formal mediation sessions?
4. Following student participation in conflict mediation skills training, do teachers and parents observe students using conflict mediation skills in daily activities?

### Significance

Research supports the value of a conflict mediation program as one component of a school violence prevention program. However, research is limited regarding the effect of training in conflict mediation and attitude toward violence. It is not known if a relationship exists between training and behavior. It is not known if a relationship exists between training in conflict mediation and the interpersonal problem-solving skills a participant employs. It is not known if training in conflict mediation results in the development of skills that will enable a

student to deal with conflict productively in an environment beyond the mediation room.

This research study can contribute to the continued evaluation of school-based conflict mediation programs because the focus of this study expanded the traditional evaluation models through an examination of the effects of conflict mediation training on participants. Findings from this study have implications for program planning and curriculum development.

### Definitions

The following terms are defined as used in this study:

Attitude - The perception of or feeling toward a particular fact or situation.

Attitude Toward Conflict - This refers to the styles of handling interpersonal conflict: collaborating, accommodating, avoiding competing, and compromising.

Accommodating - A mode or style of behavior that is unassertive and cooperative and is the opposite of competing. An accommodating individual neglects personal concerns to satisfy the needs of others (Thomas, 1974).

Avoiding - A mode or style of behavior that is unassertive and uncooperative. The avoiding individual may postpone action or simply withdraw from a situation satisfying no one but preventing unpleasantness for self (Thomas, 1974).

Collaborating - A mode or style of behavior that is both cooperative and assertive. This mode involves working with others to identify a solution that satisfies the concerns of all parties involved (Thomas, 1974).

Competing - A mode or style of behavior that is assertive and uncooperative. A competing individual pursues their personal concerns at

the expense of others. This is a power-oriented mode in which an individual focuses on winning (Thomas, 1974).

Compromising - A mode or style of behavior that is the midpoint between cooperativeness and assertiveness. "It is the middle ground between competing and accommodating. Compromising gives up more than competing but less than accommodating. Unlike avoiding, it addresses a situation of conflict but in less depth than collaborating" (Thomas, 1974, p. 10). Compromising involves sharing, both parties give up something to develop a mutually acceptable solution.

Conflict Mediation Skills - These skills include verbal and nonverbal communication, listening, problem-solving, critical thinking, decision making, negotiation, and mediation (K.I.D.S., 1992).

Conflict Mediation Training Program - A program that examines the causes of conflict, the styles that people use to deal with conflict, the escalation of conflict situations, and the skills need to manage conflict positively and nonviolently.

Conflict Resolution Program - A program designed to manage conflict situations in social organizations. It utilizes communication skills and problem-solving to develop alternatives to escalation of the conflict. It may include negotiation, youth court, consensus decision-making and mediation.

Interpersonal Conflict - Refers to a dispute, disagreement or problem between two people.

Mediation - The process of resolving disputes and conflicts with the help of a neutral third party.

Mode - A style, behavior or method of dealing with a conflict situation.

Peer Mediation Program - A school-based conflict mediation program in

which students, as a neutral third party, serve to facilitate the mediation of a dispute.

### Limitations

This study investigated the effects of participation in a conflict mediation training program on one group of students in one public middle school in a suburban community located southwestern Virginia. The results of this study cannot be generalized beyond that population.

### Overview of Chapters

The chapters of this dissertation are organized as follows:

Chapter 1 includes an introduction to the topic, the statement of the problem, the purpose of the study, the research questions, the significance of the study, the definition of terms, and the limitations of the study.

Chapter 2 presents a review of literature and is divided into six sections. Section one examines theories of conflict including the work of Deutsch, Owens and Bercovitch. Section two discusses theories regarding the origins of conflict. Section three examines the work of Blake and Mouton, Thomas, and Rahim in identifying styles of handling conflict. Section four provides a historical perspective on the development of mediation programs. Section five examines research on the roots of youth violence. Section six discusses research findings regarding the success of current conflict mediation programs.

Chapter 3 describes the research design of this study. The population, hypotheses, instrumentation, and treatment procedures are discussed.

Statistical analysis procedures are explained as are the methods used to control researcher bias.

Chapter 4 displays and discusses an analysis of the data collected. The results of statistical analysis are presented for each hypothesis.

Chapter 5 presents a summary of findings for each hypothesis. Conclusions based on the findings are explained and a discussion of the evidence is provided. Implications of the study and recommendations for future research conclude the dissertation.

## Chapter 2

### Review of Literature

Conflict in schools and society is not a new problem. It is the increase in frequency and level of violence that has generated an increase in public concern. The media is flooded daily with issues of violence in the schools and the communities of this country. Numerous initiatives targeting violence are being examined.

#### The Nature and Theory of Conflict

Conflict has been recognized as an inevitable part of life. Interpersonal, intergroup and international conflicts have been documented throughout history. The study of conflict did not become a recognized area of scholarship until the middle of this century, but study in the area of conflict theory did occur much earlier (Deutsch, 1991).

There have been many different theoretical approaches to the study of conflict. There has been no consensus reached on a definition of conflict. The approach taken has usually reflected the academic discipline of the theorists.

Psychologists have focused on intrapersonal conflict; social psychologists have concentrated on interpersonal and intergroup conflict; sociologists have stressed social, role status and class conflicts; economists have focused on game theory and decision-making, economic competition, labor

negotiations and trade disputes; political scientists and international specialists have centered their work on political and international conflict (Deutsch, 1991, p26).

Classical management theory viewed the presence of conflict as evidence of the failure by management to plan adequately or to exercise sufficient control (Owens, 1991). Human relations theory viewed conflict as evidence of failure to develop appropriate group norms (Owens, 1991). Kenneth Boulding (1962) defined conflict as “a situation of competition in which the parties are aware of the incompatibility of a potential future position and in which each party wishes to occupy a position that is incompatible with the wishes of the other” (p.5).

Bercovitch (1984) examined the various positions of researchers on the theory and nature of conflict, contrasting a narrow approach with a wide approach and a subjective approach with an objective approach. The narrow approach to the study of conflict viewed conflict as being in opposition to cooperation and focused on the destructive behavior involved in the conflict. Park and Burgess (as cited in Bercovitch, 1984) assumed a narrow approach when they defined conflict as a conscious struggle for status. Mack and Snyder (as cited in Bercovitch, 1984) did not define conflict but identified characteristics of conflict phenomena:

- the existence of two or more parties
- their interaction arises from a condition of resource scarcity or position scarcity
- they engage in mutually opposing actions
- their behavior is intended to damage, injure or eliminate the other party

- their interactions are overt and can be measured or evaluated by outside observers (Bercovitch, 1984, p. 4).

A wide approach to the study of conflict required the researcher to examine the conditions that contribute to incompatible interests or values. This approach studied resource distribution and viewed conflict to be the result of problems within the system (Bercovitch, 1984). Dahrendorf (as cited in Bercovitch, 1984) stated that conflict is the result of a difference in access to power and authority. Curle (as cited in Bercovitch, 1984) assuming a wide approach, stated that conflict results when a person is prevented from achieving his potential.

Subjective and objective approaches differed in the question of when a conflict exists. The subjective approach believed that conflict was the result of the perception of the parties. Conflict existed when a party perceives a conflict exists. The objective approach asserted that a conflict existed whenever there are incompatible interests or goals regardless of whether or not the parties are aware of these differences. This approach attributed conflict to the structure of the situation not to the individual parties (Bercovitch, 1984).

Bercovitch acknowledged the confusion and ambiguity of the debates among researchers. He utilized the Galtung Conflict Triangle (Bercovitch, 1984) to clarify the theory of conflict, labeling each angle one of the components of a conflict situation. Angle A, conflict (incompatible situations) corresponded to the wider and objective approach to conflict theory. Angle B, Attitude (tensions, hostility) corresponded to the subjective approach. Angle C, behavior (violence, aggression) corresponded to the narrow approach. The figure presented a visual image of the relationship among the three components of a conflict situation (Bercovitch, 1984).

Morton Deutsch explained that “conflict exists whenever incompatible

activities occur” (as cited in Owens, 1991, p. 244). Deutsch (1991) identified several themes common to all disciplines studying conflict. They are:

- Parties in most conflicts have mixed motives - cooperative and competitive interests.
- Conflict can be constructive as well as destructive. There are two distinct processes in conflict resolution: a cooperative process and a competitive process. Each has distinctive strategies of dealing with conflict, differing communication and influence processes and different attitudes toward the other party.
- The intensity of cooperative and competitive interests of the parties will determine whether the outcome will be destructive or constructive for the parties(Deutsch, 1991, p.27).

He stated that there are many additional factors that affect conflict between parties including the relationship between the parties, the power of the parties and the abilities and skills of the parties in conflict resolution (Deutsch, 1991).

### Origins of Conflict

Conflicts within educational settings occur between students, teachers, administrators and parents. A conflict occurs when actions of one person interfere with attainment of the goals of another (Deutsch, 1973). Conflicts can involve issues of needs, goals, wants, or demands. Limited resources or different values may be catalysts for a conflict. Value conflicts may reflect differences in cultural or social beliefs and tend to be more difficult to resolve

(Crawford & Bodine, 1996). Glasser (as cited in Crawford & Bodine, 1996) stated that most conflicts involve an attempt to satisfy a basic need. He identified four basic psychological needs:

- Belonging - Fulfilled by loving, sharing and cooperating with others.
- Power - Fulfilled by achieving, being recognized and respected.
- Freedom - Fulfilled by making choices.
- Fun - Fulfilled by laughing and playing (p.7).

Working in the area of organizational systems Rahim(1992) identified sources of conflict. Based on his analysis, he classified sources of conflict into eleven categories based on the conditions that stimulated the development of a conflict.

- Affective Conflict occurs when incompatible feelings and emotions exist between two parties.
- Conflict of Interest exists when two parties differ in preferences for the allocation of a scarce resource.
- Conflict of Values occurs when two parties have different values or beliefs.
- Cognitive Conflict occurs when judgments regarding a solution to a problem differ.
- Goal Conflict results when opinions differ regarding desired outcomes.
- Substantive Conflict results when there is disagreement over the task or content issues of a particular situation.
- Realistic Conflict refers to issues of rational content such as tasks, goals, and values. Nonrealistic conflict is the result of a

need to release tension and express hostility. Nonrealistic conflict has little to do with goal attainment.

- Institutionalized Conflict is characterized by parties who follow rules and behave in predictable ways while addressing the conflict such as occurs in labor-management negotiations.
- Retributive Conflict is a conflict situation in which the parties choose to draw out the conflict in an attempt to punish the other party.
- Misattributed Conflict occurs because of an incorrect assignment of causes.
- Displaced Conflict occurs when parties direct their hostilities to parties not involved in the issue.

Filley (1975) stated that conflicts are distributed along a continuum from competitive to disruptive. Competitive conflicts are the win-lose type, allowing only one winner at the cost of total loss for the other party. This type of conflict is governed by rules of interaction that focus on winning not on defeating the other party. Disruptive conflicts are not focused on winning but rather on defeating or harming the opponent.. Conflict resolution focuses on eliminating the conflict between individuals or groups.

### Styles of Handling Conflict

Interpersonal conflict exists in every organization or group. The age or composition of the group does not preclude the existence of interpersonal conflict. Numerous styles of handling interpersonal conflict have been identified. Bercovitch (1984) stated that throughout history societies have had three basic

ways of handling conflict: (a) violence and coercion, (b) various forms of bargaining and negotiations, and (c) the intervention of a third party. Most of the research focused on this topic has been in the area of organizational conflict and group dynamics. The work of Mary Parker Follett during the first part of this century marked a move from traditional organization theory of scientific management toward the human relations movement and contingency theory (Owens, 1991). She viewed management as a social process directly affected by the situation. Follett (as cited in Rahim, 1992) identified three ways of handling conflict: (1) domination or the exercise of power, (2) compromise, and (3) integration or problem solving to a win-win situation.

Blake and Mouton (1964) working in the area of organizational leadership, classified styles of handling interpersonal relations based on the following two attitudes of a manager: (1) concern for production and (2) concern for people. They developed a two-dimensional model which depicted five modes or styles of interpersonal relations: forcing, withdrawing, smoothing, compromising, and problem-solving.

Building upon the work of his predecessors, Thomas (1974) developed a classification of modes based on the intentions of the parties involved and was entitled the Conflict and Conflict Management Model. The two dimensions of his scheme were (1) cooperativeness or the extent to which the individual attempts to satisfy the concerns of the other party and (2) assertiveness or the extent to which the individual attempts to satisfy self. He identified five conflict handling modes: competing, collaborating, compromising, avoiding and accommodating.

Rahim (1992) built on the work of Blake, Mouton and Thomas to develop a two dimensional model of styles of handling interpersonal conflict. The first dimension identified the degree to which a person acts with concern for satisfying his or her own wishes, while the second dimension represented the degree of concern for the wishes of others.

The descriptions of styles developed by Rahim have many similarities to those developed by Thomas. Rahim (1992) described integrating as the problem-solving style involving collaboration between the parties in conflict. This style requires open and honest communication and exchange of all information to eliminate any misunderstandings. The underlying source of the conflict is examined and a solution is developed that is acceptable to both parties. Obliging is also known as accommodating and is primarily concerned with the feelings and desires of others. An obliging person gives up his or her own concerns to satisfy the wishes of others. The dominating style is also known as competing. This style uses force to win and may ignore the wishes of others. The dominating person has a win-lose orientation. Avoiding is also known as suppression. An avoiding person may postpone dealing with a situation, may withdraw from it or refuse to admit there is a conflict. This person satisfies none of the parties involved. Compromising involves give and take. A compromising person does not give up as much as the obliging person but more than the dominating one. He/she examines possibilities for resolution in greater depth than the avoiding person but not to the extent that the integrating person does (Rahim, 1992).

Studies of some behavioral scientists including Blake & Mouton (1964), and Likert and Likert (as cited in Rahim, 1992) have indicated that integration or problem-solving is the most desirable style for managing conflict. Other studies such as those of Rahim & Bonoma (as cited in Rahim, 1992) and Thomas(1976) suggested that circumstances dictate the most appropriate style. When considering organizational effectiveness, Rahim (1992) stated that:

integrating and to some extent compromising styles can be used in dealing with conflicts involving strategic or complex issues. The remaining styles can be used to effectively deal with conflicts involving

tactical, day-to-day, or routine problems. Thus, the selection and use of each style can be considered as a win-win style provided that it is used to enhance individual, group and organizational effectiveness ( p.26).

When considering interpersonal relations, avoidance and accommodating do not provide resolution to a conflict. Rather, push the conflict out of the current picture. Since the conflict has not been addressed and resolved, it may reappear. Compromise, while desirable in some situations, may result in dissatisfaction on the part of both parties. This, too, may result in a resurgence of the original conflict. Competing perhaps is desirable in some situations such as defending a principle or legal rights; however, it may result in resentment on the part of the losing party. Collaboration, while requiring the most time and effort, appears to provide the greatest long term satisfaction for all parties. Because of the direct involvement of the parties in the development of a resolution, the commitment to the solution is usually more sincere. (Bercovitch, 1984).

### Development of Mediation Programs

Mediation is one of the oldest forms of conflict resolution employed around the world. "For as long as people have had disputes with each other, mediators have counseled the use of reason over arms, the benefits of compromise over adjudication" (Kolb, 1994). Rudolf Hess is believed to have attempted to mediate an end to World War II (Wall, 1990). Kissinger mediated the Yom Kippur War (Wall, 1990). The mediation efforts of Jimmy Carter resulted in the Camp David Accords (Wall, 1990). United Nations mediators

have worked in many areas of the world, including Afghanistan and the Persian Gulf (Wall, 1990).

The business world has utilized mediation to resolve disputes since the beginning of the century (Roderick, 1988). Interest in mediation has grown dramatically during the past 15 years. Mediation is now used in divorce proceedings; in civil, consumer, and commercial relations; in environmental planning; and in the development of governmental procedures and regulations (Kolb, 1994).

Mediation was a method of solving disputes in ancient China. Followers of the Confucian philosophy believed that conflict caused a disruption in the natural harmony of life. The most desirable resolution was achieved through moral persuasion and agreement rather than force or coercion (Folberg & Taylor, 1984). Mediation is today, an important part of the Chinese legal system. Within Chinese cities, families are grouped by streets into committees. Each committee is led by a “head” whose responsibilities include appointing two to five mediators to serve the committee. The job of the mediators is to resolve conflicts in the streets, thus, enabling parties to reach an agreement without losing dignity (Wall, 1990).

Throughout the history of Japanese laws and customs, conciliation and mediation have been a primary means of dispute resolution. Traditionally, village leaders mediated disputes between community members. Prior to World War II, a provision that formalized conciliation of personal disputes in Japanese courts was enacted (Folberg & Taylor, 1984).

The customs and traditions of Africa provide conflict resolution through the moot or neighborhood meeting. Any member of the community may call a moot where a member of the community acts as a mediator to aid the disputants in reaching a mutually acceptable resolution. (Folberg & Taylor, 1984). Historically, kinship circles such as those in Africa, and extended families of

many cultures have provided a mediation resource (Vroom, Fossett & Wakefield, as cited in Folberg & Taylor, 1984). As villages grew into cities and families changed from extended to nuclear, the family became less of a resource for instruction in conflict resolution (Folberg & Taylor, 1984).

The church or religious group had, for centuries, played an important role in resolving conflicts among its members. Often, the priest, minister or rabbi served as a mediator, particularly in family disputes. Ethnic and religious groups and other minority groups have historically established their own means of conflict resolution to avoid the imposition of government regulation. (Folberg & Taylor, 1984).

Four groups were primarily responsible for the development of conflict resolution and peer mediation programs in the United States. They were researchers in the area of conflict resolution, advocates of nonviolence, anti-nuclear war activists, and members of the legal profession (Johnson & Johnson, 1995). The first of the peer mediation programs was Teaching Students to be Peacemakers developed by David Johnson and Roger Johnson. This program was a school-wide program that taught all students the nature of conflict, the negotiation procedure, and the mediation process (Johnson & Johnson, 1996). The Children's Project for Friends was a Quaker project directed by Priscilla Prutzman and developed by a few teachers in New York who wanted to teach nonviolence to children. This program was a school-wide program that focused on teaching all students the value of justice, caring and integrity (Johnson & Johnson, 1996). This project later became the Children's Creative Response to Conflict (CCRC) (Cheatham, 1988). During the late 1970s, other educators, who were anti-nuclear war activists, taught about nuclear war and the roots of violence. These educators formed the Educators of Social Responsibility (ESR) in the early 1980s. The goals of the ESR were to promote peace and socially conscious education. They developed the Resolving Conflict Creatively

Program, a curriculum which incorporated the strategies of cooperative learning and dispute resolution. In addition, they trained students to be peer mediators. (Cheatham, 1988).

During the 1980s, the Carter administration, through the passage of the Dispute Resolution Act, encouraged the development of Neighborhood Justice Centers in communities throughout the country (Folberg & Taylor, 1984). The goal of these centers was to provide citizens an alternative to litigation. Members of the legal profession became involved with the Neighborhood Justice Centers and provided assistance in their development. Those working in community mediation centers focused on conflict resolution skills and believed they were teaching people skills that they would use throughout their lives. Community mediators approached local schools and offered to teach conflict resolution skills to students. The San Francisco Community Boards Conflict Managers Program was a curriculum designed to train peer mediators in the elementary schools. This was later modified and expanded by Gail Sadalla (Johnson & Johnson, 1996). The four programs described above are still leaders in the field of conflict resolution and mediation.

Many groups across the country were working in the area of conflict resolution and mediation but there was no national organization. Communication between groups did not exist. In August 1984, representatives of community mediators, educators and religious communities came together to form the National Association for Mediation in Education (NAME). This organization provided an organized communication system among the groups (Cheatham, 1988). Representatives began to offer their services to local schools; some schools were interested and first school-based conflict mediation programs began. In each program a critical component for success was administrative support (Cheatham, 1988). Community mediation centers have continued to grow across the country, awareness of the value of conflict resolution as an

alternative method of dispute resolution has increased. NAME estimates that conflict mediation programs have increased from 50 in 1984 to more than 5000 in 1994 (Girard, 1994). The Office of Juvenile Justice and Delinquency Prevention estimated in March of 1997 that more than 10,000 mediation programs had been implemented in the schools of this country.

### Roots of Youth Violence

Both collective and individual aggression have long been prominent and recurring features of life in the United States. In both small and large groups, our citizens have instigated revolution, civil war, vigilante movement feuding, agrarian and labor strife, racial lynching, student riots and ever more frequent youth gang violence. (Goldstein & Conoley, 1997 p. 3).

Between 1988 and 1992 overall juvenile arrests for violent crime increased by 29.1 percent (Goldstein & Conoley, 1997). The Office of Juvenile Justice and Delinquency Prevention reported that of those arrested in 1990 for violent crimes, 23,060 were under age 15 and 1270 were under age 10 (Goldstein & Conoley, 1997). In 1988 and 1989 new records for firearm murders of young people in the age range of 19 and under were established in the United States. Teenagers in the United States were four times more likely to be murdered than teenagers from 21 other industrialized countries (Goldstein & Conoley, 1997). Crime statistics indicate that 30 percent of all violent crimes are committed against juveniles and are likely to be committed by someone of the same age (National Institute of Justice, 1995).

The home is often a site of physical violence. Goldstein & Conoley (1997) reported that between 4 percent and 14 percent of all children in the United States are physically abused. Of these, one-third grow up to be abusers themselves. Strauss (as cited in Goldstein & Conoley, 1997) estimated that 25 percent of wives in the United States have been abused by their husbands. In

1990, the United States House of Representatives Subcommittee on Health and Long Term Care reported that 1.5 million, or 5 percent of the elderly population were abused each year, frequently by their own children (Goldstein & Conoley, 1997).

The topic of youth violence has received increased attention during recent years. Numerous researchers and educators have identified factors that contribute to the observed increases of violence in society and in the schools. Kadel and Follman (1993) stated that all children in the United States live in a violent society. "Violence permeates art, sports, entertainment, literature and our cities and towns" (Kadel & Follman, 1993, p.51).

The first, and perhaps one of the most widely discussed, factors contributing to increases in violence is the changing nature of the American family. Traditionally, the family has been the most important teacher of a young child. It was within the family, that a child learned moral responsibility, values and nonviolent ways of managing conflict. The increase in the number of families in which both parents work and in number of single parent families has, in some cases, resulted in a lack of role models for children (Kadel & Follman, 1993). Children are often unsupervised or left in the care of others and families are often unable to fulfill the role of primary teacher (Kadel & Follman, 1993).

Many children are living in poverty. Child welfare experts have warned for 25 years that increasing poverty, lack of educational opportunity, latchkey homes, child abuse, domestic violence and family breakup would lead to increases in violence (Sautter, 1995). Schorr (as cited in Kadel & Follman, 1993) used the phrase "Cycle of Disadvantage" to refer to the conditions faced by many young people growing up in communities with high rates of poverty and unemployment, low levels of education and high teenage pregnancy rates. A vision of little hope and great frustration develops and may result in aggressive behavior. Poverty is a particularly significant factor in determining whether a

person will engage in violent behavior (Kadel & Follman, 1993).

Child abuse is a serious problem in this country. Living in a dysfunctional family in which abuse is prevalent is considered by many to be a predictor of future problems. Olweus (as cited in Kadel & Follman, 1993) reported that the “upbringing of bullies - who often become violent criminals as adults - is typically characterized by too little love, care and supervision; unclear limits on children’s behavior; and physical abuse” (p 58).

The neighborhood, community and family of past generations no longer exist. Drugs, poverty and abuse have disrupted many families. Isolation, separation and abuse have, in some cases, resulted in a lack of socialization. Violence is, in some communities, accepted as a satisfactory method for resolving disputes (Johnson & Johnson, 1995).

Some believe the mass media has had an impact on the acquisition of aggressive behavior and on the increases in violence (Goldstein & Conoley, 1997). During 1994, prime time television showed an average of six acts of violence per hour. A child watching Saturday morning cartoons saw 25 violent acts occur each hour (Goldstein & Conoley, 1997). The National School Safety Center (1990) stated that frequently killing is depicted as the most effective problem-solving technique and that even the heroes use violence to defeat evil (Kadel & Follman, 1993). Researchers agree that the level of violence on television has not only served to increase fearfulness but has also had a role in decreasing sensitivity and concern regarding violence. The public is becoming more tolerant of higher levels of violence (Goldstein & Conoley, 1997). “We believe that acts of school violence are best viewed not as a phenomenon apart, but as yet another manifestation of the behavioral trends that characterize so much of contemporary life in the United States” (Goldstein & Conoley, 1997 p. 5).

Easy access to guns and drugs has contributed to increases in juvenile violence (Johnson & Johnson, 1995). A student can purchase a gun for \$25 or

take one from home. Bringing a gun to school can be for show, revenge, protection or in response to peer pressure (Kadel & Follman, 1993) Alcohol and drug use often lead to loss of self-control and judgment. The cost of buying illegal drugs and the profits to be made from the sale of illegal drugs have contributed to increased incidents of juvenile crime (Kadel & Follman, 1993).

Gangs exist in most cities and many suburban and rural areas. Many young people who join gangs do so because they are seeking the sense of belonging and family a gang provides. Violence is often viewed as an accepted part of gang life (Kadel & Follman, 1993).

Johnson and Johnson reported in 1995, based on a study conducted over a five-year period, that students were involved in conflicts daily. The type of conflicts varied from control of resources, bullying, teasing, and playground issues in suburban areas to violence and aggression in urban areas. In addition, they stated that the majority of students did not possess the skills to resolve conflicts successfully. They further concluded, that educators should be concerned about the incidents of conflict occurring within the schools across the nation (Johnson & Johnson, 1996).

### Evaluations of Current Conflict Mediation Programs

Often referred to as the Fourth R (NAME, 1994), school-based conflict mediation programs have rapidly increased throughout the United States. This has been primarily a response to violence and discipline problems and the increase in social problems confronting the schools (Steen, C.G. 1994). United States Attorney General Janet Reno has identified conflict mediation as beneficial in the efforts to reduce violence and has encouraged schools to implement mediation programs (1997). Attorney General Reno cited studies in

New York, Nevada, and New Mexico as support for her position and pledged support to mediation initiatives (1997).

The New Mexico Center for Dispute Resolution has utilized conflict mediation in gang disputes, parent-child disagreements, and community conflicts (Smith, 1993). The National Institute of Justice conducted an evaluation of two conflict resolution programs: Schools Teaching Options for Peace (S.T.O.P.) and the Safe Harbor Program. Findings from this study indicate that participating students had fewer feelings of helplessness and no longer believed that respect was gained through violence. In addition, students participating in the S.T.O.P. program used reason to solve problems more frequently than untrained students (1995).

Trevaskis stated that peer mediation programs were an effective means of resolving conflicts in schools (1994). Further, he identified benefits to disputants as well as mediators. Disputants were given the opportunity to realize they could resolve conflicts peacefully (Trevaskis, 1994). Examining conflict mediation programs in New York, Inger (1991) stated that students reported feeling safer at school and better about themselves. Furthermore, fewer fights were reported by teachers. The Clark County School Board in Las Vegas, Nevada, reported that conflict mediators successfully resolved 86 percent of the conflicts mediated, there were fewer fights, and the mediators self-esteem increased (LeBoeuf & Delany-Shabazz, 1997).

A principal who implemented a peer mediation program stated that students learned people skills that would benefit them throughout life, and that students learned alternatives to violence (Welch, 1989). Students who had been trained in conflict mediation displayed higher levels of self-esteem, confidence and had a more positive attitude (Carter, 1994). The Ohio Commission on Dispute Resolution and Conflict Management reported that evaluations indicated improvements in student communication skills and attitudes toward conflict

(1994). Metis Associates evaluated the Resolving Conflict Creatively Program in New York and found positive changes in classroom climate, decreases in physical violence, and fewer incidents of name calling and verbal insults (1989).

The growth of conflict mediation programs has been based on the belief that such programs have a strong impact on the level of violence in schools. Johnson and Johnson have stated that much of the research available on school-based mediation programs was limited in scope and provided only anecdotal accounts while making broad generalizations regarding impact (1996). Other research provided a description of curriculum or of the implementation process (Johnson & Johnson, 1996). In response to the perceived need for a more methodologically sound evaluation of the impact of conflict mediation programs, Johnson and Johnson conducted a study designed to identify the nature of conflict in schools and the strategies used by students to resolve conflicts before and after training in conflict mediation. The study compared the outcomes of conflicts resolved by students who were trained in conflict mediation with those resolved by students who had no training.

Johnson and Johnson examined 15 studies documenting the nature of conflict in schools. They concluded that “although the alarm about violence in schools may be somewhat overstated, serious concern is justified about how students manage their conflicts” (1996, p. 470). While successful conflict mediation programs require an atmosphere of cooperation, Johnson and Johnson stated that most schools focus on competition and encouraged the implementation of cooperative learning activities to develop a cooperative atmosphere for mediation of conflicts (1996). Johnson and Johnson found that most untrained students relied on withdrawal or aggression to resolve conflicts. They also stated that untrained students most frequently chose distributive negotiations, seeking to win at the other person’s expense. After training, the majority of students chose the integrative negotiation procedures, attempting to

solve the problem by reaching a mutually acceptable solution (Johnson & Johnson, 1996). The Johnson and Johnson study concluded that training resulted in a more positive school climate, a decrease in discipline problems and suspensions, and increases in student's psychological health and self-esteem (1996).

### Summary

This review of literature examined the work of Deutsch, Owens, and Bercovitch in the area of conflict theory. It provided a discussion on the research regarding the origins of conflict and styles of handling conflict including the work of Blake and Mouton, Thomas, and Rahim. It included a historical perspective on the development of mediation in the United States and within the public schools. This chapter examined the research regarding the roots of youth violence and provided evaluations of current school-based conflict mediation programs across the United States.

## Chapter 3

### Research Methodology

This chapter contains a brief restatement of the purpose of the study, along with a description of the population, the research design, the test administration and instrumentation, and the statistical analyses employed.

#### Introduction

This study was designed to determine if exposure to conflict mediation training has an effect on the attitude of participants toward conflict and their interpersonal problem-solving skills. The Thomas-Kilmann Conflict Mode Instrument was used to measure attitude toward conflict. The Alternative Solutions Test was used to measure problem-solving skills. Participants range in age from 12 years of age (seventh grade) to 14 years of age (ninth grade).

This study was sought to learn the extent to which students trained in conflict mediation skills have assimilated the skills into their daily lives through examination of attitudes and behaviors when faced with conflict external to the mediation room. Parents were asked to complete questions from the Child Behavior Checklist (CBCL) and teachers were asked to complete questions from the Teachers' Report Form (TRF) to provide these data.

#### Population

Participating in this study were 40 students in three grade levels

(10 ninth graders, 24 eighth graders, and 6 seventh graders) enrolled in a public middle school located in a suburban southwestern Virginia county. Students resided in a middle to upper-middle level socioeconomic community. Many students were from well-educated professional families. These students were scheduled to attend a high school in which 85 to 90 percent of the students plan to attend college.

Participants were recommended by the school faculty during the spring of 1996 as candidates for selection as peer mediators for the 1996-97 school term. The responsibilities of a peer mediator were discussed with the faculty, and they were advised to consider leadership qualities and observed abilities when making their recommendations. All faculty members were eligible to make recommendations; however, faculty recommendations were anonymous in all cases. A school committee composed of guidance counselors, teachers, and the mediation advisors selected 20 students, from those recommended, to be trained in conflict mediation and to serve as peer mediators. The committee selected an equal number of male and female students to participate in the training program. Criteria used for selection by the committee included observed leadership skills, commitments to other organizations and activities, and the ability to balance school work with extracurricular activities. Students selected for training by the committee composed the experimental group for this study. The remaining students from the recommended population made up the control group. These students had not participated in a conflict mediation training program prior to this study.

### Research Design

A post test only design with a control group was employed to collect the data required by the first two research questions. The independent variable was

participation in the conflict mediation training program, Conflict Mediation for a New Generation, which was delivered by a clinician of Blue Ridge Community Services. The dependent variables were: (1) attitude toward conflict as measured by the Thomas-Kilmann Conflict Mode Instrument and (2) interpersonal problem-solving skills as measured by the Alternative Solutions Test. Data required by the third and fourth research questions were collected by using the Child Behavior Checklist and the Teachers' Report Form completed, respectively, by parents and teachers of the participants.

During November 1996, those students selected to serve as peer mediators, the experimental group, participated in a two-day conflict mediation training program, Conflict Mediation for a New Generation, developed by the Community Mediation Center in Harrisonburg, Virginia. The control group received no training other than that provided by the regular school curriculum. The training program used a multi-strategy approach to instruction consisting of discussions, video presentations, modeling of individual skills, role playing, large and small group activities and instruction from the trainers and advisors.

The conflict mediation training was divided into four sessions and was delivered on two consecutive days. Session One began with activities designed to acquaint participants with other members of the group. Team-building activities were included to encourage the development of group unity. Participants received an overview of the peer mediation program and the responsibilities of a peer mediator. Session One focused on understanding conflict. During this session participants learned that conflict is a natural part of life and not necessarily bad. They learned that it is the response to conflict that determines the consequences of a conflict situation. Participants examined and role played the various methods people use to cope with conflict.

Session Two, held on the afternoon of the first day dealt with nonverbal communication. During this session participants were taught that information can

be communicated in many ways. Through role playing students examined the meaning of physical clues including posture, expression, and eye contact. Also, discussed was the meaning of such characteristics of speech such as volume and tone.

Session Three, held on the morning of the second day, began with a review of the work done during the previous day. During this session, students focused on and participated in activities designed to develop active listening skills. "I" messages were discussed and practiced.

Session Four, held on the afternoon of the second day, focused on the mediation model. Students rehearsed the steps of the mediation process (Appendix A) and were instructed in skills for handling difficult situations and diffusing anger.

Following completion of the training, new mediators met daily with other mediators and sponsors during the homeroom period. During this period, planning for daily activities was completed, follow-up training and counseling were delivered. After-school meetings were scheduled which focused on skill development and refinement, and new mediators were provided opportunities to be observers in mediation sessions conducted by experienced mediators.

During February 1997, each participant (Appendix B) and parent (Appendix C) received a letter explaining the nature of the research and requesting written approval for participation. Both participants and parents were provided opportunities to contact the researcher by phone for questions or comments. Following receipt of written approval for participation in this study, each participant was provided information regarding testing dates and times.

### Research Instruments

The instruments used in this study included the Alternative Solutions

Test (Shure and Spivak, 1985) and the Thomas-Kilmann Conflict Mode Instrument (Thomas, 1974), the Child Behavior Checklist (Achenbach, 1991) and the Teacher's Report Form (Achenbach, 1991).

Alternative Solutions Test (Shure and Spivak, 1985)

This instrument measures individual ability to conceptualize multiple solutions to interpersonal problems. Individuals are instructed to identify ten solutions to three problems commonly faced by children. Responses are scored for relevance and originality relating to the problem. Categories for classification of responses are provided by the authors. Repetition of earlier responses and responses not relevant to the problem stated are not counted.

A sample protocol for this test is:

Problem: Robert wants his friend to stop bugging him so he can do his homework.

Responses:

1. Go watch TV.  
(Relevant Solution - Keep friend busy)
2. Go read a book.  
(Enumeration of #1 - Keep friend busy)
3. Go to another room to play.  
(Enumeration of #1 - Keep friend busy)
4. Go away and come back later.  
(Relevant Solution - Request to leave)
5. Say I won't be your friend anymore.  
(Relevant Solution - Withdraw friendship)
6. Say your mother is calling.

(Relevant Solution - Trick/Deceive - Lies)

7. Tell him his father is calling.

(Enumeration of #6 - Trick/Deceive - Lies)

8. I don't know.

(No Score)

9. I don't know.

(No Score)

10. I don't know.

(No Score)

In the sample provided, there four different relevant solutions.

This test takes approximately 20-30 minutes to complete. Test-retest reliability of relevant solutions for the totals of all three stories has been documented at .62 (Shure and Spivak, 1985). This instrument has been used in previous research to measure the same dependent variable used in this study, interpersonal problem-solving skills of middle school students (Lanahan, 1987). This instrument was recommended for this research by the staff of Lewis-Gale Clinic - Psychological Services Department (personal conversation, Wilkerson, 1996; Lanahan, 1996).

#### Thomas-Kilmann Conflict Mode Instrument (Thomas and Kilmann, 1974)

Based on the theoretical and empirical work of Blake and Mouton in 1964, Lawrence and Lorsch in 1967, and Burke in 1970, this instrument is designed to measure the behavior of an individual when handling interpersonal conflict situations. The authors identified two basic dimensions of behavior in situations of conflict: 1) assertiveness, the extent to which one attempts to satisfy his/her own concerns, and 2) cooperativeness, the extent to which one attempts to satisfy the concerns of others (Thomas, 1974). Five methods or modes of dealing with interpersonal conflict were developed and defined by the authors to

measure the basic dimensions identified. The five modes were:

Competing - This mode is assertive and uncooperative in which an individual pursues his or her own concerns at the expense of others. This is a power-oriented mode in which an individual focuses on winning(Thomas, 1974).

Accommodating - This mode is unassertive and cooperative and is the opposite of competing. An accommodating individual neglects his or her own concerns to satisfy the needs of others (Thomas, 1974).

Avoiding - This mode is unassertive and uncooperative. The avoiding individual may postpone action or simply withdraw from a situation, thereby satisfying no one but preventing unpleasantness for self (Thomas, 1974).

Collaborating - This mode, which is both cooperative and assertive, involves working with others to identify a solution that satisfies the concerns of all parties involved (Thomas, 1974).

Compromising - This mode is the midpoint between cooperativeness and assertiveness. "It is the middle ground between competing and accommodating. Compromising gives up more than competing but less than accommodating. Unlike avoiding, it addresses a situation of conflict but in less depth than collaborating" (Thomas, 1974, p. 10). Compromising involves sharing, with both parties giving up something to develop a mutually acceptable solution.

This instrument is a forced choice questionnaire consisting of 30 pairs of statements. Concern for social desirability bias of previous instruments led the authors to develop this instrument. While this instrument was developed for use in business, it has been used in several studies involving students: Jamieson and Thomas, 1974, Content, 1983, O'Loughlin, 1991, and Watt, 1994 (Thomas, 1977). Average test-retest reliability is .64 (Thomas, 1977).

### Child Behavior Checklist - CBCL (Achenbach, 1991)

The Child Behavior Checklist (CBCL) was originally developed by Dr. Thomas M. Achenbach during the 1960s and is designed to provide empirical assessment of children's competencies and problems. The original instrument was modified in 1991, so that it now collects information from parents regarding the child's activities, social relations and school performance. It is composed of 118 items which describe specific behavioral and emotional problems and is scored on a three-step scale (0=not true, 1=sometimes true and 2= often true). Two open-ended items are included to allow reporting of additional problems and has a one week test-retest reliability of .93.

### Teacher's Report Form -TRF(Achenbach, 1991)

The Teacher's Response Form corresponds to the CBCL and is designed to obtain information regarding academic performance and behavioral/emotional problems of observed students. It is composed of 118 items, 93 of which are contained on the CBCL, and is scored on a three-step scale (0=not true, 1=sometimes true, 2=frequently true). The remaining items relate to classroom behaviors such as attention to work and assignments. It is designed to enable comparison of a child to a normative sample; however, it can be used to compare observations of different people (Achenbach, 1991). This form had a 15 day test-retest reliability of .92 (Achenbach, 1991).

## Data Collection

### Permission to Conduct Research.

During September 1996, the researcher met with the Superintendent of Schools for the school district. The purpose of this meeting was to present a

proposal to conduct research. The superintendent expressed an interest in the research topic and encouraged the researcher to pursue the topic. The researcher was instructed to submit copies of test instruments to the Assistant Superintendent for final approval. A letter indicating final approval was received on September 26, 1996.

#### Experimental and Control Groups.

The Thomas-Kilmann Conflict Mode instrument and the Alternative Solutions Test were administered to all participants by the researcher during regular homeroom periods. All participants were scheduled to meet with the researcher during a study hall, break, lunch, or other period of time during the school day for the purpose of completing the instruments. The instruments were coded by student group, but no participants were individually identified.

#### Parents

A cover letter and a Child Behavior Checklist were sent to all participants parents who were requested to complete the problem scales indicated and to return the checklists to the researcher in the enclosed, self-addressed, stamped envelopes.

#### Teachers

Physical education teachers of all participants were asked to complete the problem scales of the Teachers' Report Form for each participant they instructed. Physical education teachers were selected because they observe students both in large group settings, which often require teamwork among students, and in typical classroom settings. One academic teacher of each participant was asked to complete the problem scales of the Teacher's Report Form. This second teacher was one who instructed the participant during a class

period occurring during the other half of the school day, opposite the physical education period. For example, a participant with physical education during the sixth period would have a checklist completed his or her their second period teacher. Teachers were instructed to return the checklists to a collection box in the school office.

### Data Analysis

Measures of central tendency, standard deviations, and other appropriate statistics were calculated for both experimental and control groups for each dependent variable tested. Analysis of variance and t-tests were conducted to learn if significant effects were present following the treatment.

### Researcher Bias

The researcher was employed by the school system in which this project was conducted. It was, therefore, important to address the question of researcher bias in scoring responses. Peer review was employed to address the potential of researcher bias. A random sample of data collected was evaluated and analyzed by Dr. Linda Fore, Assistant Professor, Department of Teaching and Learning, Virginia Polytechnic Institute and State University, and by Dr. Cheryl Turner, Supervisor of Instructional Personnel for Roanoke County Schools to verify interpretations made by the researcher. Evaluations by Drs. Fore and Turner produced reliability scores of 94 and 91 percent, respectively.

## Chapter 4

### Results

This study, designed to determine possible effects of participation in a conflict mediation training program on middle school students, it examined both student attitudes toward a conflict situation and the development of problem-solving strategies. In addition, evidence of behaviors and attitudes of students in daily life was collected in order to determine if training were assimilated or applied only in the mediation setting.

The data collected for this study are reported in three sections. Section 1 provides demographic information concerning the school community and the population. Section 2 restates the original research questions and the four hypotheses. Quantitative analysis of data collected for these hypotheses is presented. Section 3 describes the findings of a focus group of participants.

#### Population Demographics

The school in which this study was conducted is a middle school housing grades 6-9 with an enrollment of 990. The school is located in a suburban southwestern Virginia county and serves a middle to upper-middle level socioeconomic community. Course offerings within the school are varied and include programs for gifted and talented, advanced-level, average level, and special education students. Students have the opportunity to choose from four foreign languages and a variety of technology courses. Most students who complete the 9<sup>th</sup> grade in this school will attend a high school in which 85-90 percent of the students plan to attend college.

Forty students enrolled in grades seven, eight and nine participated in this study. Participants were recommended by the school faculty during the spring of 1996 as candidates for selection as peer mediators for the 1996-97 school term. The responsibilities of peer mediators were discussed with the faculty, and they were advised to consider leadership qualities and observed abilities when making their recommendations. All faculty members were eligible to make anonymous recommendations. A school committee composed of guidance counselors, teachers, and the mediation advisors selected 20 students, from those recommended, to be trained in conflict mediation and to serve as peer mediators. Demographic data are presented in Table 1. Students selected for training by the committee composed the experimental group for this study. The remaining students from the recommended population made up the control group; these students did not receive conflict mediation training.

### Quantitative Analysis

This study was designed to answer the following research questions:

1. Does participation in conflict mediation skills training affect the attitude a student has toward conflict?
2. Does participation in conflict mediation skills training affect the strategies a student employs in interpersonal problem-solving?
3. Are the skills taught in conflict mediation training assimilated by the students and used in situations other than formal mediation sessions?

**Table 1**  
**Population Demographic Data**

Characteristic	Control Group N=20	Experimental Group N=20	100% N=40
Gender			
Male	11	10	52.5%
Female	9	10	47.5%
Grade Level			
Seventh	4	2	15%
Eighth	10	14	60%
Ninth	6	4	25%

4. Following participation in conflict mediation skills training, did the teachers and parents observe students using conflict mediation skills in daily activities?

The following null hypotheses were developed from the research questions for this study:

- H<sub>0</sub>1 There will be no significant difference in attitudes of students toward dealing with situations of conflict.
- H<sub>0</sub>2 There will be no significant difference in the abilities of students to demonstrate problem-solving skills.
- H<sub>0</sub>3 There will be no significant difference in attitudes and behaviors of students reported by parents.
- H<sub>0</sub>4 There will be no significant difference in attitudes and behaviors of students reported by teachers.

#### Hypothesis 1

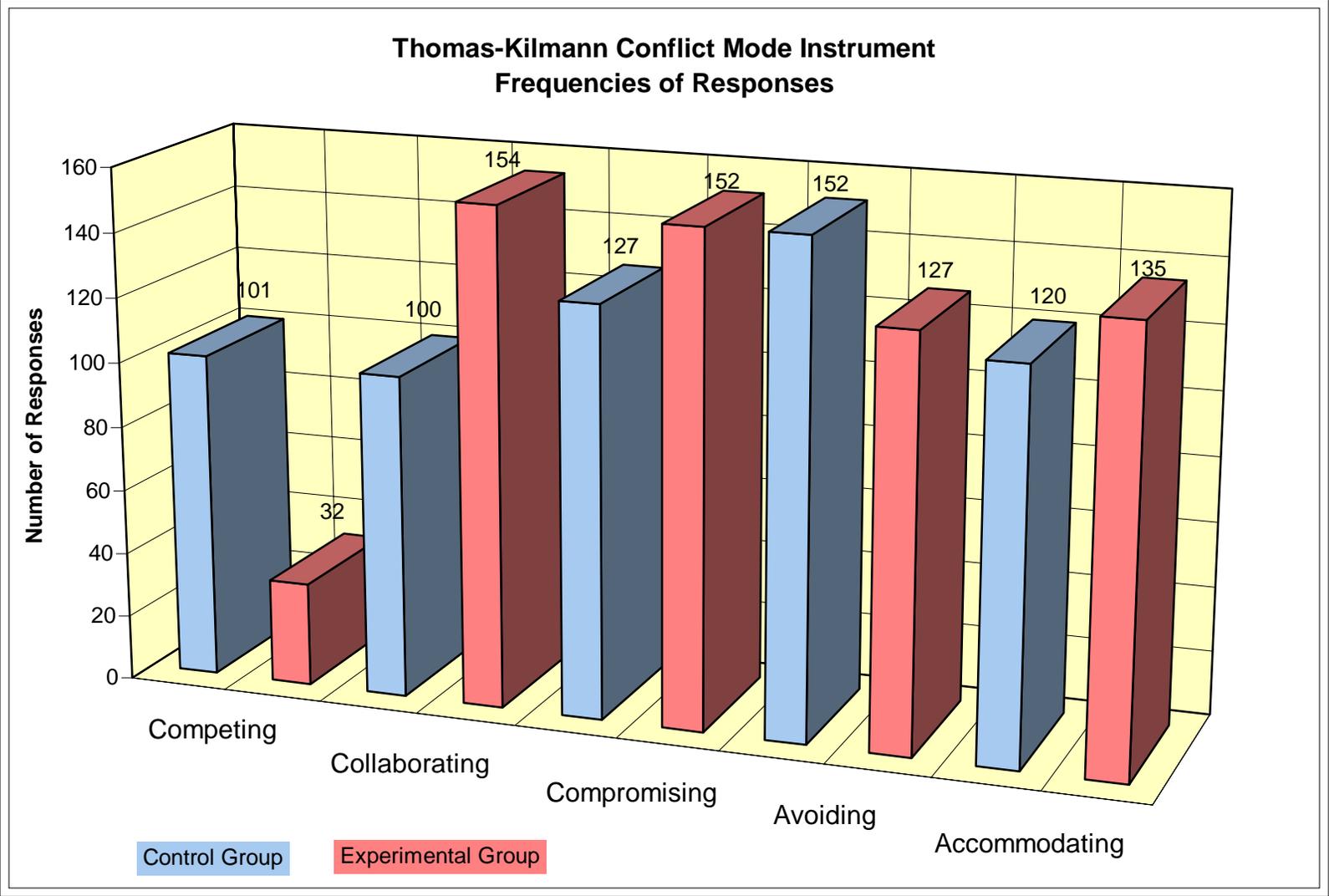
The first hypothesis stated that there would be no significant differences in attitude toward conflict between the experimental group of students who received training in conflict mediation and the control group of students who received no training in conflict mediation. The Thomas-Kilmann Conflict Mode Instrument was administered to both groups of students simultaneously. This instrument has been designed to identify the attitude and approach used by individuals when they are faced with situations of conflict. Choices are placed on a two-dimensional scale of assertiveness, the extent to which an individual

attempts to satisfy personal concerns, and cooperativeness, the extent to which an individual attempts to satisfy the concerns of others. Modes include competing, avoiding, accommodating, collaborating, and compromising. For the purpose of this study, the term mode is used to refer to a style or method of dealing with a conflict situation. Competing is the most assertive mode in which an individual focuses solely on personal desires and may use force or coercion to win. Avoiding is the least assertive and cooperative mode in which no resolution to a conflict is developed. Accommodating is an unassertive and cooperative choice in which an individual focuses on satisfying the wishes of others. Collaborating is the problem-solving mode and requires involvement of parties in the conflict in order to develop a resolution which satisfies the needs of all parties. The compromising mode involves bargaining between parties to achieve resolution. While compromising requires greater evaluation of the source of conflict by the involved parties than does accommodating, avoiding, or competing, it does not require as much as does collaborating.

Frequencies of responses in each mode were determined and are displayed in Graph 1. Collaboration (154) and compromise (152) were the most frequently selected modes by participants in the experimental group. Avoiding (152) was the most frequently chosen mode by members of the control group.

Mean scores of each mode were determined for both groups and are presented in Table 2. The mean of the experimental group for the compromising mode was 7.6 while the control group was 6.35. The control group mean for the avoiding mode was 7.6 and the experimental group was 6.35. The largest difference between groups was in the competing mode, where the control group mean was 5.05 and the experimental group was 1.6.

Percentages of total responses were calculated to identify the most frequently selected mode by each group. Results are displayed in Graph 2. While participants in the experimental group chose collaborating or

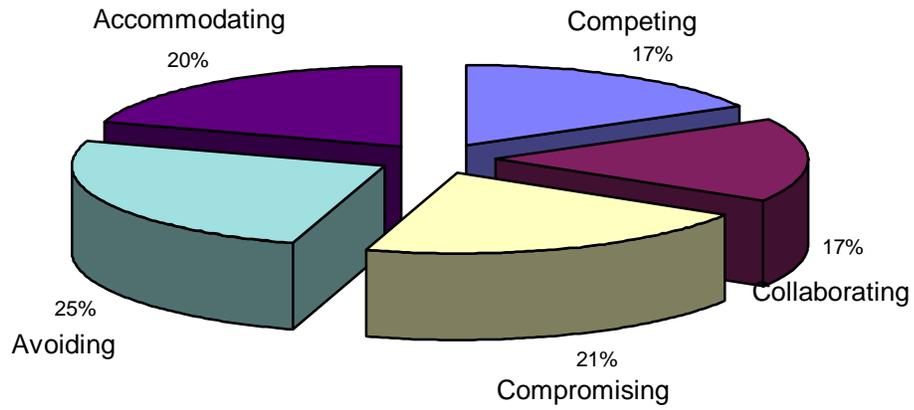


**Graph 1**

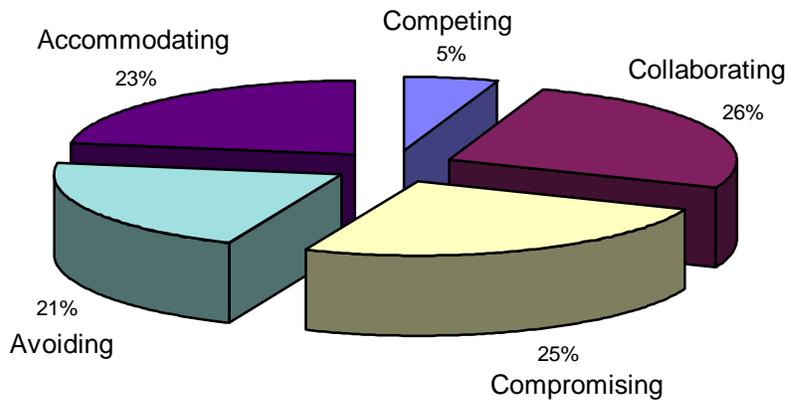
**Table 2**  
**Thomas - Kilmann Conflict Mode Instrument**  
**Mean Scores and Standard Deviations**

Modes	Control Group		Experimental Group	
	$\bar{x}$	SD	$\bar{x}$	SD
Competing	5.05	2.212	1.6	1.875
Collaborating	5.0	1.835	7.7	1.922
Compromising	6.35	1.182	7.6	1.789
Avoiding	7.6	1.635	6.35	1.755
Accommodating	6.0	2.000	6.75	2.149

### Thomas-Kilmann Conflict Mode Instrument Control Group Responses



### Thomas-Kilmann Conflict Mode Instrument Experimental Group Responses



**Graph2**

compromising in 51 percent of the situations presented, those in the control group participants selected collaboration or compromise in 38 percent of the situations. Competing and avoiding were selected in 42 percent of the situations by the control group compared to 26 percent by the experimental group

Analysis of variance (ANOVA) was conducted on scores in each mode to identify significant differences. Table 3 provides a summary of ANOVA results on the competing mode. A statistically significant difference between the experimental group and the control group was indicated ( $F_{28.31268}$ ) at the  $p < .05$  level. Table 4 presents ANOVA results on the collaborating mode. Results ( $F_{20.64232}$ ) indicated a statistically significant difference between the two groups was present at the  $p < .05$  level. The ANOVA results on the compromising mode are presented in Table 5. Figures ( $F_{6.787367}$ ) indicated a statistically significant difference between the two groups was present at the  $p < .05$  level. Table 6 contains a summary of the ANOVA results on the avoiding mode. The results ( $F_{5.4298125}$ ) indicated a statistically significant difference was present at the  $p < .05$  level. A summary of ANOVA results on the accommodating mode is presented in Table 7. A statistically significant difference ( $F_{1.3053435}$ ) was not found between groups on the accommodating mode at the  $p < .05$  level. Analysis of the ANOVA results indicate rejection of the null hypothesis.

## Hypothesis 2

The second hypothesis stated that there would be no significant difference in demonstrated interpersonal problem-solving skills between the experimental group and the control group. The Alternative Solutions Test was administered to both groups of students. This instrument was designed to measure the ability of an individual to conceptualize multiple solutions to a

**Table 3**  
**Thomas-Kilmann Conflict Mode Instrument**  
**Competing Mode**

Analysis of Variance						
Summary						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>		
Control	20	101	5.05	4.8921053		
Experimental	20	32	1.6	3.5157895		
Source of Variation						
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F-crit</i>
Between Groups	119.025	1	119.025	28.31268*	0	4.098172
Within Groups	159.75	38	4.203947			
Total	278.775	39				

\* Significant at  $p < .05$

**Table 4**  
**Thomas-Kilmann Conflict Mode Instrument**  
**Collaborating Mode**

Analysis of Variance						
Summary						
<i><b>Groups</b></i>	<i><b>Count</b></i>	<i><b>Sum</b></i>	<i><b>Mean</b></i>	<i><b>Variance</b></i>		
Control	20	100	5	3.368421		
Experimental	20	154	7.7	3.694737		
Source of Variation						
	<i><b>SS</b></i>	<i><b>df</b></i>	<i><b>MS</b></i>	<i><b>F</b></i>	<i><b>P-value</b></i>	<i><b>F-crit</b></i>
Between Groups	72.9	1	72.9	20.64232*	0.0001	4.098172
Within Groups	134.2	38	3.531579			
Total	207.1	39				

\*Significant at  $p < .05$

**Table 5**  
**Thomas-Kilmann Conflict Mode Instrument**  
**Compromising Mode**

Analysis of Variance						
Summary						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>		
Control	20	127	6.35	1.3973684		
Experimental	20	152	7.6	3.2		
Source of Variation						
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F-crit</i>
Between Groups	15.625	1	15.625	6.787367*	0.01297	4.098172
Within Groups	87.35	38	2.29868			
Total	102.975	39				

\*Significant at  $p < .05$

**Table 6**  
**Thomas-Kilmann Conflict Mode Instrument**  
**Avoiding Mode**

Analysis of Variance						
Summary						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>		
Control	20	152	7.6	2.6736842		
Experimental	20	127	6.35	3.0815789		
Source of Variation						
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F-crit</i>
Between Groups	15.625	1	15.625	5.4298125*	0.025206	4.098172
Within Groups	109.35	38	2.8776316			
Total	124.975	39				

\*Significant at  $p < .05$

**Table 7**  
**Thomas-Kilmann Conflict Mode Instrument**  
**Accommodating Mode**

Analysis of Variance						
Summary						
<b>Groups</b>	<b>Count</b>	<b>Sum</b>	<b>Mean</b>	<b>Variance</b>		
Control	20	120	6	4		
Experimental	20	135	6.75	4.6184211		
Source of Variation						
	<b>SS</b>	<b>df</b>	<b>MS</b>	<b>F</b>	<b>P-value</b>	<b>F-crit</b>
Between Groups	5.625	1	5.625	1.3053435	0.2603872	4.098172
Within Groups	163.75	38	4.3092105			
Total	169.375	39				

situation of interpersonal conflict. The instrument was introduced and explained to participants in a group setting. Individual sessions were scheduled during which the instrument was completed.

The maximum score of each participant was 30. The total possible score for each group was 600. Members of the control group developed 241 possible solutions to the three situations of conflict presented compared to 416 possible solutions generated by members of the experimental group. Mean scores and standard deviations for each group were calculated and are reported in Table 8. The mean score for the experimental group was 20.8 compared to control group 12.05, representing a 66.4 percent of change.

Analysis of variance (ANOVA) was conducted to determine if a statistically significant difference was present between the control group and the experimental group. A summary of the ANOVA results is reported in Table 9. The analysis of variance conducted on data collected with the Alternative Solutions Test determined that a statistically significant difference ( $F = 55.93338$ ) existed between the experimental and the control groups at the  $p < .05$  level. Results indicate rejection of the null hypothesis.

### Hypothesis 3

The third hypothesis stated that there would be no significant difference between the experimental group and the control group in parent observations of behaviors and attitudes. Parents were asked to complete questions selected from the problem scales of the Child Behavior Checklist (CBCL) relating to the categories of aggressive and delinquent behavior, withdrawn, anxious/depressed and social problems. This instrument is designed to evaluate a wide range of behavioral and emotional problems and social competencies of children and adolescents. It is scored on a three-step rating scale ranging from

**Table 8**  
**Alternative Solutions**  
**Mean Scores and Standard Deviations**

		Control Group	Experimental Group
Total Relevant Responses		241	416
$\bar{X}$		12.05	20.8
Standard Deviation		3.485	3.723

**Table 9**  
**Alternative Solutions**  
**Analysis of Variance**

Analysis of Variance						
Summary						
<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Mean</i>	<i>Variance</i>		
Control	20	241	12.05	12.78684		
Experimental	20	416	20.8	14.58947		
Source of Variation						
	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F-crit</i>
Between Groups	765.625	1	765.625	55.93338*	0	4.098172
Within Groups	520.15	38	13.68816			
Total	1285.775	39				

\* Significant at  $p < .05$

0 to 2. A score of 0 is marked if the statement is never true about the child, 1 indicated the statement is sometimes true and a 2 indicates the statement is often true.

### Parent Responses

Responses were received from 17 parents of students in the control group and 16 parents of students in the experimental group. Based on checklists completed by parents, profiles were prepared using the CBCL Profile Sheet. Analysis of the profiles indicated no significant behavioral or emotional concerns for any participant.

The mean scores and standard deviations were calculated and are reported in Table 10. The total possible score on each problem scale category is included in Table 10. Analysis of the mean scores revealed that the parents of students in the experimental group reported their children exhibited less aggressive behavior ( $\bar{x}$  .875) than the parents of students in the control group ( $\bar{x}$  2.0) In addition, parents of the experimental group indicated their children experienced fewer social problems ( $\bar{x}$  .435) than did the parents of the control group ( $\bar{x}$  1.47).

Responses by parents for each category were analyzed through the use of t-tests. Significance was evaluated at the  $p < .05$  level. Table 11 presents a summary of t-test results on the withdrawal problem scale. The results ( $t$  .8572) indicated no statistically significant difference between groups. The t-test results ( $t$  0.6121) on the anxious/depressed problem scale are presented in Table 12. No statistically significant difference between groups was indicated on the anxious/depressed scale. Table 13 reports the t-test results on the social problem scale. The  $t$  score (2.6728) indicated a statistically significant difference different was present between the two groups. Table 14 presents the t-test results on the delinquent problem scale. Results ( $t$  0.6600) indicated no

**Table 10**  
**Parent Responses**  
**Child Behavior Checklist**  
**Means and Standard Deviations**

Category	Possible Score	Control Group	Experimental Group		
		$\bar{X}$	Standard Deviation	$\bar{X}$	Standard Deviation
Withdrawn	10	.941	.899	.688	.793
Anxious/ Depressed	12	1.529	1.505	1.250	1.064
Social Problems	12	1.470	1.328	.438	.814
Delinquent Behavior	12	.529	.717	.375	.619
Aggressive Behavior	14	2.000	1.581	.875	.885

**Table 11**

**Parent Responses - Child Behavior Checklist  
Category - Withdrawal**

t-Test Two Sample		
	<i><b>Control Group</b></i>	<i><b>Experimental Group</b></i>
Mean	0.941176	0.6875
Variance	0.808824	0.629167
Observations	17	16
Pooled Variance	0.721893	
Hypothesized Mean Difference	0	
df	31	
t	0.857179	
P(T<=t) one-tail	0.198962	
t Critical one-tail	1.695519	
P(T<=t) two-tail	0.397925	
t Critical two-tail	2.039513	

Note. The total possible score for this category was 10.

**Table 12**

**Parent Responses  
Child Behavior Checklist  
Category - Anxious/Depressed**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	1.529412	1.25
Variance	2.264706	1.133333
Observations	17	16
Pooled Variance	1.717268	
Hypothesized Mean Difference	0	
df	31	
t	0.612143	
P(T<=t) one-tail	0.272454	
t Critical one-tail	1.695519	
P(T<=t) two-tail	0.544907	
t Critical two-tail	2.039513	

Note. The total possible score for this category was 12.

**Table 13**

**Parent Responses  
Child Behavior Checklist  
Category -Social Problems**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	1.470588	0.4375
Variance	1.764706	0.6625
Observations	17	16
Pooled Variance	1.23138	
Hypothesized Mean Difference	0	
df	31	
t	2.672814*	
P(T<=t) one-tail	0.005943	
t Critical one-tail	1.695519	
P(T<=t) two-tail	0.011887	
t Critical two-tail	2.039513	

Note. The total possible score for this category was 12.

\*Significant at  $p < .05$

**Table 14**

**Parent Responses  
Child Behavior Checklist  
Category -Delinquent Behavior**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	0.529412	0.375
Variance	0.514706	0.383333
Observations	17	16
Pooled Variance	0.451139	
Hypothesized Mean Difference	0	
df	31	
t	0.660014	
P(T<=t) one-tail	0.25706	
t Critical one-tail	1.695519	
P(T<=t) two-tail	0.514119	
t Critical two-tail	2.039513	

Note. The total possible score for this category was 12.

statistically significant difference was present. The t-test results on the aggressive behavior problem scale are presented in Table 15. Findings ( $t=2.4998$ ) indicated a statistically significant difference was present. Results indicate rejection of the null hypothesis.

#### Hypothesis 4

The fourth hypothesis stated that there would be no significant difference between the experimental group and the control group in the reported behavior by teachers in the area of attitude and behavior. Two teachers of each participant were asked to complete the problem scales of the Teacher's Report Form (TRF). Teachers were asked to record their observations of student behavior relating to the following categories: withdrawn, anxious/depressed, social problems, attention problems, delinquent behavior, and aggressive behavior. The category of attention problems was included to document the daily observations by the teacher in a classroom setting.

#### Teacher Responses

Thirty-eight responses were received from teachers of students in the experimental group. Thirty-nine responses were received from teachers of students in the control group. Profiles for each participant were developed using the TRF Profile Sheet. Analysis of the profile sheets identified all participants to be in the normal range which indicated no significant behavioral or emotional problems had been observed by teachers.

The means and standard deviations for each category were calculated and are reported in Table 16. The greatest difference in means occurred in the category of aggressive behavior. The experimental group mean was 1.39

**Table 15**

**Parent Responses  
Child Behavior Checklist  
Category -Aggressive Behavior**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	2	0.875
Variance	2.5	0.783333
Observations	17	16
Pooled Variance	1.669355	
Hypothesized Mean Difference	0	
df	31	
t	2.499802*	
P(T<=t) one-tail	0.008964	
t Critical one-tail	1.695519	
P(T<=t) two-tail	0.017929	
t Critical two-tail	2.039513	

Note. The total possible score for this category was 14.

\*Significant at  $p < .05$

**Table 16**

**Teacher Responses  
Teacher's Report Form  
Means and Standard Deviations**

Category	Possible Score	Control Group	Experimental Group		
		$\bar{X}$	Standard Deviation	$\bar{X}$	Standard Deviation
Withdrawn	16	.436	.788	.342	.815
Anxious/ Depressed	24	1.589	2.185	1.684	2.610
Social Problems	16	.69	1.217	.315	.702
Attention Problems	24	2.282	3.119	1.763	3.017
Delinquent Behavior	16	.564	1.165	.474	1.032
Aggressive Behavior	28	2.820	4.745	1.395	3.106

compared to the control group mean of 2.82.

Teacher responses were analyzed using t-tests to determine if statistical differences existed at the  $p < .05$  level. between the experimental and the control groups of students in behaviors and attitudes. Table 17 provides a summary of the t-test results on the withdrawn category. Results ( $t$  0.513585) indicated no statistically significant difference was present. The t-test results on the category of anxious/depressed are contained in Table 18. Results ( $t$  -0.172354) indicated no statistically significant difference existed. Table 19 presents the t-test results on the social problems category. Findings ( $t$  1.657158) indicated no statistically significant difference was present. Table 20 provides a summary of the t-test results on the attention category. No statistically significant difference ( $t$ .741566) was found between the two groups. The analysis of t-test on the category of delinquent behavior is presented in Table 21. Results ( $t$  0.359993) indicated no statistically significant difference present. Table 22 contains the t-test results on the category of aggressive behavior. Findings ( $t$  1.555471) revealed no statistically significant difference existed. The null hypothesis was not rejected

### Focus Group

Analysis of the data collected indicated an extremely significant difference in interpersonal problem solving skills between the control group and the experimental group of students. While the researcher had expected a degree of difference, the difference was much greater than anticipated. Furthermore, the researcher had previously noted members of the experimental group displayed a more serious approach to the Alternative Solutions Test individual interview sessions. The size of the difference combined with the observed difference in attitude led the researcher to conduct an informal focus group session with a sample of participants selected from the experimental group. During November

**Table 17**

**Teacher Responses  
Teacher's Report Form  
Category -Withdrawn**

t-Test Two Sample		
	<b><i>Control Group</i></b>	<b><i>Experimental Group</i></b>
Mean	0.435897	0.342105
Variance	0.620783	0.663585
Observations	39	38
Pooled Variance	0.641898	
Hypothesized Mean Difference	0	
df	75	
t	0.513585	
P(T<=t) one-tail	0.304526	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.609052	
t Critical two-tail	1.992102	

Note. The total possible score for this category was 16.

**Table 18**

**Teacher Responses  
Teacher's Report Form  
Category -Anxious/Depressed**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	1.589744	1.684211
Variance	4.774629	6.816501
Observations	39	38
Pooled Variance	5.781952	
Hypothesized Mean Difference	0	
df	75	
t	-0.172354	
P(T<=t) one-tail	0.431812	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.863623	
t Critical two-tail	1.992102	

Note: The total possible score for this category was 24.

**Table 19**

**Teacher Responses  
Teacher's Report Form  
Category -Social Problems**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	0.692308	0.315789
Variance	1.481781	0.492176
Observations	39	38
Pooled Variance	0.993576	
Hypothesized Mean Difference	0	
df	75	
t	1.657158	
P(T<=t) one-tail	0.050833	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.101665	
t Critical two-tail	1.992102	

Note. The total possible score for this category was 16.

**Table 20**

**Teacher Responses  
Teacher's Report Form  
Category -Attention Problems**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	2.282051	1.763158
Variance	9.734143	9.104552
Observations	39	38
Pooled Variance	9.423545	
Hypothesized Mean Difference	0	
df	75	
t	0.741566	
P(T<=t) one-tail	0.230333	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.460666	
t Critical two-tail	1.992102	

Note. The total possible score for this category was 24.

**Table 21**

**Teacher Responses  
Teacher's Report Form  
Category -Delinquent Behavior**

t-Test Two Sample		
	<i>Control Group</i>	<i>Experimental Group</i>
Mean	0.564103	0.473684
Variance	1.357624	1.066856
Observations	39	38
Pooled Variance	1.214179	
Hypothesized Mean Difference	0	
df	75	
t	0.359993	
P(T<=t) one-tail	0.359932	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.719864	
t Critical two-tail	1.992102	

Note. The total possible score for this category was 16.

**Table 22**

**Teacher Responses  
Teacher's Report Form  
Category -Aggressive Behavior**

t-Test Two Sample		
	<b><i>Control Group</i></b>	<b><i>Experimental Group</i></b>
Mean	2.820513	1.394737
Variance	22.519568	9.650782
Observations	39	38
Pooled Variance	16.170967	
Hypothesized Mean Difference	0	
df	75	
t	1.555471	
P(T<=t) one-tail	0.062022	
t Critical one-tail	1.665425	
P(T<=t) two-tail	0.124044	
t Critical two-tail	1.992102	

Note. The total possible score for this category was 28.

1997, the researcher met with eight members of the experimental group to discuss performance on the Alternative Solutions instrument. Participation in the focus group was open to all members of the experimental group. The focus group protocol is contained in Appendix D.

The focus group session disclosed an attitude of confidence among the students about their ability to solve problems and to deal with situations of conflict. They indicated they routinely faced conflict in their daily lives, both at school and home. When faced with conflict, the students said that their most common response was to listen and actively seek solutions by utilizing conflict resolution strategies. Participants predicted their performances on the Alternative Solutions had been very good.

After being informed of their performance on the test, students attributed their achievements to training and experience in conflict mediation. They stated that having been trained to solve problems, they would expect to exceed the performance of the untrained control group. The participants verbalized a high level of confidence in their ability to resolve conflict situations. Students were enthusiastic about conflict mediation training and their roles as peer mediators. Two students discussed their plans to continue in college, the study of the mediation process and conflict resolution. One stated that she plans to enter the field of professional mediation upon completion of college.

## Chapter 5

### Conclusions

This chapter includes a brief restatement of the purpose of this study, a summary of findings, and the conclusions of the researcher. In addition, a discussion of thoughts, recommendations for practitioners and recommendations for future research are included.

#### Purpose

Various forms of conflict mediation programs have been developed and implemented in the schools across this nation (NAME, 1994). Research to date has focused primarily on the effectiveness of conflict mediation programs in reducing the number of incidents of violence and discipline referrals in schools. The major purpose of this study was to determine the possible effects of participation in a conflict mediation training program and of serving as a peer mediator on the attitude a student has toward conflict and the strategies employed by a student in interpersonal problem-solving. In addition, this study sought to determine if students trained in conflict mediation assimilated the skills into their daily lives by examining attitudes and behaviors of students when faced with conflict outside the school environment.

#### Summary of findings

Guided by four research questions, the researcher developed four hypotheses. This section will examine the findings relating to each hypothesis.

## Hypothesis 1

- H<sub>0</sub>1      There will be no significant difference in attitudes of students toward dealing with situations of conflict.

Findings from administration of the Thomas-Kilmann Conflict Mode Instrument indicated that students trained in conflict mediation chose compromise or collaboration in more than 50 percent of situations compared to 38 percent by the control group. The control group of students selected avoiding and competing in 42 percent of situations compared to 26 percent by the experimental group. Analysis of variance conducted on each mode revealed statistically significant differences at the  $p < .05$  level between the groups in the modes of competing, compromising, collaborating, and avoiding. No significant difference at the  $p < .05$  level was present in the accommodating mode. The null hypothesis was rejected.

## Hypothesis 2

- H<sub>0</sub>2      There will be no significant difference in the abilities of students to demonstrate interpersonal problem-solving skills.

The Alternative Solutions Test was administered to each participant. Members of the experimental group developed 416 relevant solutions to the situations presented compared to 241 developed by the control group. The total possible score of each participant was 30 on this instrument. The mean for the

experimental group was 20.8 and the control group 12.05. Analysis of variance determined a statistically significant difference ( $F=55.93338$ ) was present between the two groups at the  $p < .05$  level. The null hypothesis was rejected.

### Hypothesis 3

H<sub>03</sub> There will be no significant difference in attitudes and behaviors of students reported by parents.

The Child Behavior Checklist (CBCL) was utilized to record behaviors and attitudes observed by parents of participants. Parents of participants in the experimental group reported observing less aggressive behavior by their children than did parents of participants in the control group. Parents of participants in the control group indicated the children experienced more social problems than did the parents of the experimental group participants. Profiles of participants placed all participants of both groups well within the normal range indicating no significant behavioral or emotion concerns when compared to the general population.

Data collected were analyzed by conducting t-tests on each problem scale. Results indicated that statistically significant differences existed between the groups in the area of aggressive behavior and social problems at the  $p < .05$  level. No significant differences were found in the areas of withdrawal, anxious/depressed and delinquent behavior. It should be noted that both categories reporting significant differences involve interpersonal relations. The null hypothesis was rejected based on findings in the categories of aggressive behavior and social problems.

#### Hypothesis 4

- H<sub>0</sub>4 There will be no significant difference in attitudes and behaviors of students reported by teachers.

Two teachers of each participant completed the problem scales of the Teacher's Report Form. The category of attention problems was included to record the daily observations of the teacher in a classroom setting. The physical education teacher of each participant was chosen to complete the TRF, because they observe students in both classroom and large group activity settings,. Data collected were analyzed by conducting t-tests on each category. Teacher responses revealed no statistically significance differences at the  $p < .05$  level between the groups. The null hypothesis was not rejected.

#### Conclusions

Based on the findings of the Thomas-Kilmann Conflict Mode Instrument, it can be concluded that training in conflict mediation and the experience of serving as a peer mediator has a positive effect on the attitude a student has toward conflict. Rather than being limited to fighting or giving up, students trained in conflict mediation have learned alternate actions. In more than one-half of the situations faced, those students trained in conflict mediation elected to approach situations of conflict by seeking satisfactory resolutions to the disputes through either collaboration or compromise. Using force or attempting to dominate others was the least chosen approach to conflict resolution by members of the experimental group of students.

Based on the strong significance of the findings on the Alternative

Solutions Test, it can be concluded that training in conflict mediation skills and serving as a peer mediator have positive effects on the problem-solving skills of a student. Those students participating in conflict mediation training generated 416 relevant solutions to the problems presented compared to 241 developed by the control group. A focus group session held with a sample of participants in the experimental group provided additional support for this position.

Reports from parents indicated that training in conflict mediation coupled with serving as a peer mediator have positive effects on the behaviors and attitudes of students. Students trained in conflict mediation, the experimental group, according to the responses from their parents, exhibited less aggressive behavior and experienced fewer social problems. This difference may or may not have been attributable to the treatment. While parent observations provided support for this conclusion, reports of teachers indicated only slight differences in the observed behaviors of students. Teachers recorded positive behaviors and attitudes for all students involved in this study. The differences between the two groups reported by teachers was not statistically significant and the null hypothesis was not rejected.

## Discussion

Based on the findings of this study, it can be concluded that training in conflict mediation and the establishment of a peer mediation program may provide many benefits for students. Not only are attitudes affected, but students feel empowered to solve their own problems. Research exists which supports collaboration or problem-solving as the most satisfactory approach for dealing with conflict (Blake & Mouton, 1964; Likert & Likert, 1976). Other researchers in the field believe that circumstances must dictate the most appropriate approach to be taken (Rahim & Bonma, 1979; Thomas, 1976). This study indicates that

the preferred approach to conflict by students trained in conflict mediation is collaboration and compromise. The trained students, however, do not rely solely on these styles, which implies their having the ability to discriminate based on the circumstances.

Students, while participating in a focus group, stated that they had been taught to solve problems, and that they believed they had the ability to reason and develop alternatives. They were confident of their ability to solve problems and believed that, because of their training, they were expected to do so. The students indicated they frequently utilized the skills they learned in conflict mediation to resolve disputes within their family as well as among their friends. They identified active listening to be one of the most valuable skills they learned in the training process. They expressed a belief that most conflicts could be resolved by carefully listening to the other party and being willing to consider alternatives or modifications to one's own position.

We are living in a climate of nay-sayers who bombard the media with criticism of the condition of education stating that students are not being prepared for the future. Conflict mediation training is certainly not the only response needed to this criticism, but it does provide training in life skills by equipping students with interpersonal problem solving skills. Society is diverse and violent, and conflict is an everyday occurrence. Conflict mediation training teaches students that conflict in and of itself is not bad, but that it is the response to conflict that determines its outcome.

An examination of the mission and goals of almost any school system will reveal the objective to prepare students for becoming responsible citizens and participating members of the community. Through training in conflict mediation, students learn to respect various points of view. This, in turn, contributes to the students' abilities to work with a diverse population and perform as part of a team, which is one of several traits the business community

has identified as desirable in the workforce.

Students trained in conflict mediation are provided the opportunity to expand their abilities and develop confidence in themselves. The mass media have frequently discussed the poor choices often made by adolescents, including engaging in substance abuse and violent behaviors. Schools must not only equip students with both the knowledge and skills to make good decisions but also provide them opportunities to utilize their skills. Mediation programs will not provide all the answers to the problems of youth and society, however they should be recognized as one component in a total program of preparing the students of today for the world of tomorrow.

#### Recommendations for the Practitioner

A program of conflict mediation has been found effective in reducing violence in the schools. This study has found that participation in a conflict mediation training program has positive effects on the attitudes, behaviors and problem-solving skills of students. Consideration should be given to the inclusion of conflict mediation training in the regular school curriculum. There are numerous approaches to teaching conflict mediation which range from small group instruction to the peaceable school approach, providing instruction for all students and staff of a school. Each school staff must determine the most appropriate format for their community. However, it is recognized by many in the field of school-based conflict mediation programs that the most important factor in determining the success of a mediation program is the support provided by the school administration ( Eisler, Lane, & Mei, 1995; Morse & Andrea, 1994).

## Recommendations for Future Research

1. Utilize the research questions which guided this study for a study in an urban school.
2. Utilize the research questions which guided this study for a study in a rural school.
3. Evaluate the effects of training in conflict mediation on attitudes, behaviors, and problem-solving skills of students who have participated in a “peaceable school curriculum,” one which provides instruction in conflict mediation to all students and staff, conflict resolution training.
4. Survey the attitudes and opinions of teachers and administrators regarding the effectiveness of conflict resolution programs in order to determine the level of knowledge and support for such programs.
5. Identify the long term effects of training in conflict mediation through follow-up testing and interviews with high school students who participated in conflict mediation training during elementary or middle school.
6. Expand the population included in a study on the effects of training in conflict mediation to provide for a greater of generalization.
7. Conduct a pre and post test study on the effects of training in conflict mediation skills.

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Appendix A  
Steps in Mediation Process

# Mediation Process

## Step One - Introduction

1. Introduce yourself.
2. Ask if disputants want to solve the problem.
3. Assure confidentiality.
4. Explain the rules of mediation - get agreement from both parties.

## Step Two - Define the problem

5. Ask Disputant #1 to explain circumstances which led to the conflict.  
Restate the description given by Disputant #1. Check for clarity.
6. Ask Disputant #1 to explain how he/she feels and why.  
Restate the feelings described. Check for clarity.
7. Ask Disputant #2 to explain the circumstances which led to the conflict.  
Restate the description given by disputant #2. Check for clarity.
8. Ask Disputant #2 to explain how he/she feels and why.  
Restate the feelings described. Check for clarity.
9. Ask both disputants if they have anything else to add to the discussion.

## Step Three - Develop solutions

10. Ask Disputant #1 what he/she can do to solve the problem.
11. Ask Disputant #2 if he/she can agree to the solution, if not
12. Ask Disputant #2 if he/she has a solution.
13. Ask Disputant #1 if he/she can agree to this solution.  
Continue to go between disputants until both parties agree on a

solution. This may require brainstorming.

Step Four - Final Agreement

14. Restate the final solution to ensure both parties agree to the same solution
15. Ask each disputant what they can do to prevent this problem from happening again.
16. Ask disputants if they feel the problem is resolved.
17. Ask disputants to assure their friends that the conflict has been resolved.
18. Congratulate the disputants for their hard work.
19. Complete and sign the mediation form.

Adapted from Conflict Mediation for a New Generation.

Appendix B  
Letter to Participants

*B.J. Brewer  
5630 Penguin Drive  
Roanoke, Virginia 24018  
Telephone 540/772-2782*

I am currently working on my doctoral dissertation at Virginia Tech. I am studying the areas of problem-solving and attitude toward conflict of middle school students. I am asking you to assist my research by agreeing to participate in two testing sessions. These tests will not be graded and will not become part of any school record. Your responses are completely confidential and you will, in no way, be identified to anyone.

An Informed Consent Form, which is required for your participation in the research, is provided in the envelope attached. Please see that this envelope is delivered to your parents. I will be available to answer any questions you may have.

If you consent, please return this letter with your signature to the school office.

I appreciate your help with this project.

Sincerely,  
Ms. Brewer

I would like to participate in the research project described above.

I have delivered the Informed Consent Form to my parents/guardian.

Student Signature \_\_\_\_\_

Date \_\_\_\_\_

Appendix C  
Letter to Parents

*B.J. Brewer  
5630 Penguin Drive  
Roanoke, Virginia 24018  
Phone 540/772-2782*

I am in the dissertation phase of my doctoral work in Educational Administration at Virginia Tech. The research topic is the Effects of Training in Conflict Mediation on Attitudes Toward Conflict and Problem Solving Strategies. The purpose of this research is to determine if participation in Conflict Mediation training has a significant beneficial effect on middle school students. I am requesting your consent to administer a test to your child in the areas of attitude toward conflict and problem solving. In addition, I will ask you to complete a checklist of behaviors and attitudes observed at home. All responses are confidential and will not be identified in any way.

The majority of research which has been completed to date, investigates the reduction of violence in schools with Peer Mediation Programs. Little has been done, however, to examine the effects on students who are selected to participate in the training and to serve as mediators. I believe my research will find that the experience facilitates the development of life skills such as communication, problem solving, self control, tolerance and appreciation of diversity. Further, I believe that training in conflict mediation would be beneficial to all students.

I will be available to answer any questions you may have regarding this research project. You may contact me by phone at: Office - 772-7570 Home - 772-2782

An Informed Consent Form, which is required by the university for conduct of the research, is attached. If you give your consent, please return the signature page to me at the school or in the envelope provided.

I appreciate your support and assistance with this project.

Sincerely,  
B.J. Brewer

Appendix D  
Focus Group Protocol

## Focus Group Protocol

1. Do you use problem solving skills during you normal school day?
2. Have you ever used problem solving skills in your family interactions?
3. What do you do when faced with a conflict with a friend?
4. How would you estimate you performance on the Alternative Solutions Thinking Test?
5. How would you compare your skills at interpersonal problem-solving with those of your classmates?
6. Knowing that you were able to envision more solutions to the problems presented than other students tested, what explanation would you provide for you performance?

Appendix E  
Informed Consent

## Informed Consent for Participants of Investigative Projects

**Title of Project** - The Effects of Training in Conflict Mediation on Attitudes  
Toward Conflict and Problem Solving Strategies

**Investigator** B.J. Brewer

### **Purpose of Research**

The purpose of the research is to determine if participation in a Conflict Mediation Training Program has an effect on the attitudes toward conflict and problem-solving skills of middle school students. The study will involve 40 middle school students.

### **II. Procedures**

Participants will be divided into two groups. Group A will be composed of Peer Mediators and Group B will be composed of students from the same school. During homeroom/channel one period, participants will be asked to complete one standardized test and one individual test. These tests are not graded and will not become part of any record. Statistical analysis will be applied to determine if there is a difference in the responses from members of the two groups.

Parents and teachers of participants will be asked to complete The Child Behavior Checklist to identify any changes in behaviors and attitudes observed at home and in the classroom.

### **III. Risks**

There are no known risks to students, parents, or teachers involved in this research.

#### **IV. Benefits of this Project**

Interest in Conflict Mediation Programs has increased during the past decade. Most research has focused on the reduction of violence in the schools and has found the program to be effective in this area. Little is known about the effects of participation in Conflict Mediation training. This project is designed to examine the possible effects.

#### **V. Extent of Anonymity and Confidentiality**

Peer Mediators, Group A, are identified and known to the student body. Students selected to participate in this study as a member of Group B are unknown to all but the investigator. Responses by both groups of students, parents and teachers are completely confidential will not in anyway be identified or individually publicized.

#### **VI. Compensation**

No compensation will be provided to any participants.

#### **VII. Freedom to Withdraw**

Subjects are free to withdraw from this study at anytime without fear of penalty. Subjects are free to refuse to answer any questions they may choose.

#### **VIII. Approval of Research**

This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects at Virginia Polytechnic Institute and State University , by the Department of Educational Administration, and the Roanoke County School System.

### **IX. Subject's Responsibilities**

I voluntarily agree to participate in this study. I have the following responsibilities:

Respond honestly to questions

Fulfill my role as a mediator, if applicable

Participate in Conflict Mediation Training, if applicable

### **X. Subject's Permission**

I have read and understand the Informed Consent and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent for participation in this project.

If I participate, I may withdraw at any time without penalty. I agree to abide by the rules of this project.

**XI. Signature Page**

_____ Student Signature	_____ Date
_____ Parent Signature	_____ Date
_____ Witness Signature	_____ Date

Should I have any questions about this research or its conduct, I may contact:

<u>B.J. Brewer</u> Investigator	<u>772-7570</u> Phone
<u>Dr. Glen Earthman</u> Faculty Advisor	<u>540/231-9707</u> Phone
<u>H.T. Hurd</u> Chair, IRB	<u>540/231-5281</u> Phone

## **Vita**

Betty Powers Brewer  
5630 Penguin Drive  
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- 1973 Bachelor of Science (History and Social Science), Radford College, Radford Virginia
- 1988 Master of Science - Educational Administration and Supervision, Radford University, Radford, Virginia
- 1998 Doctor of Education -Educational Leadership and Policy Studies, Virginia Polytechnic Institute and State University, Blacksburg, Virginia