Teaching students with behavioral disorders to use a negotiation procedure: Impact on classroom behavior and conflict resolution strategy

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Teaching students with behavioral disorders to use a negotiation procedure: Impact on classroom behavior and conflict resolution strategy

by

Cathy Bullock

A dissertation submitted to the graduate faculty
in partial fulfillment of the requirements for the degree of

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Major: Education

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Iowa State University
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ABSTRACT

The impact of the instruction of a six-step problem solving negotiation procedure on the conflict resolution strategies and classroom behavior of six elementary students with challenging behaviors was examined. Moderately positive effects were found for the following negotiation strategies used by students: independent problem solving, problem solving requiring a teacher prompt, and avoiding. However, there were limited effects of the negotiation instruction on the students’ use of the negotiation strategy of forcing; and a negligible, negative effect was found on student problem solving negotiation requiring a prompt by a crisis interventionist. Similarly, there were limited effects of the instruction on students’ use of verbal and physical aggression. Findings indicated that the students with the most severe challenging behaviors benefited more from the instruction. All students were able to learn the problem solving negotiation procedure, though sometimes visual and verbal prompts were needed. Overall student and teacher attitudes toward the problem solving negotiation instruction were positive. These findings suggest that giving direct instruction of problem solving negotiation to students with challenging behaviors provides some pro-social benefits.
CHAPTER 1
INTRODUCTION TO THE STUDY

Educators are becoming increasingly aware of the importance of teaching students constructive conflict resolution strategies as part of violence prevention efforts in schools, as well as their usefulness as interventions to increase pro-social behaviors. While there has been a decrease in the rates of violent acts committed by youth (Flannery, Liau, Powell, Vesterdal, Bazsonyi, Guo, Atha, & Embry, 2003), and children actually account for a low proportion of our country’s violent crime (Males, 1999), incidents of physical aggression, verbal aggression, interpersonal violence, social victimization, and bullying continue to negatively impact school age children and school personnel (Blake, Kim, McCormick, & Hayes, 2011; International Center for Education Statistics, 2010; Shuval, Pillsbury, Cavanaugh, McGruder, McKinney, Massey, & Groce, 2010).

Furthermore, Reinke, Stormant, Herman, Puri, and Goel (2011) report in a study of 292 teachers across 5 different school districts that 75% of the teachers had worked with students who had mental health concerns and as a result displayed externalizing challenging behaviors. Yet only 34% of those same teachers felt they had the necessary skills to address the behavioral needs of the students. Currently, numerous researchers recommend the direct instruction of conflict resolution strategies as a component of safe school plans and as a way of supporting positive, pro-social behaviors in school children, many of whom are learning in culturally and economically diverse environments (Dwyer, Osher, & Hoffman, 2000; Flannery et al., 2003; Johnson & Johnson, 2006; Sellman, 2011; Shuval et al., 2010; Sinclair, Christenson, & Thurlow, 2005; Smith & Daunic, 2002).
Special education professionals focusing on the area of positive behavior supports indicate that prevention of aggressive, destructive behavior must occur at three strategic intervention levels, referred to as tiers. Interventions implemented at each tier should not only decrease destructive behaviors, but they should also increase pro-social behaviors (Morrisey, Bohanon, & Dunlap, 2010; Simonsen, Sugai, & Negron, 2008).

The first tier is primary, or universal, intervention. Intervention strategies at this level target the school wide environment by training all teaching staff to provide all students with the instructional, psychological, and social support to increase pro-social behaviors, and prevent destructive behaviors (Algozzine & Kay, 2002; George, Kinkaid, & Pollard-Sage, 2009; Simonsen et al., 2008).

The next tier is secondary intervention. At the secondary intervention level, researchers recommend intervention strategies for students who are unresponsive to first tier, preventative strategies and who are considered to be at risk for engaging in destructive, violent behavior due to environmental risks at home, low academic skills, or poorly developed social skills causing problems with peers. About 10% -15% of students need secondary tier interventions for destructive behaviors (George et al., 2009). Providing direct instruction of social problem solving as well as mentoring based interventions in which students are able to connect with positive role models to address issues of peer conflict, including bullying and victimization, are two examples of strategies that can be used as effectively at this tier (Dwyer et al., 2000; Sinclair et al., 2005).

Finally, at the tertiary prevention level, tier 3, researchers recommend designing interventions for students with the most severe and pervasive problem behaviors. Such interventions must involve highly individualized, direct instruction (Dwyer et al., 2000;
Simonsen et al., 2008). However, tier 3 interventions may incorporate some of the same strategies as tiers 1 and 2. For example, Sinclair et al. (2005) replicated an intervention called Check & Connect that incorporates social problem solving instruction and mentoring with a group of diverse high school students identified with emotional, behavioral disabilities to improve school attendance and graduation rates of this population. Thus, the Check & Connect intervention can be used at either tier 2 or tier 3 depending on the size of the targeted group and the intensity of implementation.

Skiba and Peterson (2000) argued that conflict resolution instruction may be an effective primary prevention method for establishing a violence free school climate. However, some suggest that conflict resolution instruction may occur at any of the three levels of prevention. For example at the secondary level prevention level, Hune and Nelson (2002) provided direct, small group instruction of a conflict resolution procedure to preschool students identified as displaying high rates of aggressive behavior in a Head Start Program. At the tertiary level, Kirleis (1995) and Jones and Bodtker (1998) have attempted to use conflict resolution instruction with students identified with severe behavior problems and other special needs.

Overview, Purpose, and Significance of this Study

I will now begin to delineate the purpose and significance of the proposed study. Current discourse in the literature suggests the use of conflict resolution instruction as an intervention strategy to both prevent and decrease aggressive behaviors, as well as to increase pro-social behaviors. This discourse indicates a need for further investigation of the behavioral effects of some of the individual elements of conflict resolution instruction.
While there is substantial information in the literature exploring the effects of conflict resolution instruction on the classroom and school-wide behavior of students in general education programs, still little information exists on the effects of such programs when applied to the instruction of students identified by schools as having challenging behaviors which require them to have intensive, individualized instruction at the third tier of intervention. Additionally, most of the literature focuses on analyzing the existing dysfunctional conflict resolution styles of children with problem behaviors and on the effects of the element of peer mediation. However, exploring the effects of the element of negotiation on observed conflict resolution styles of children is also important, and limited empirical information exists on the classroom effects of using direct instruction to teach students identified as having challenging behaviors and needing tier 3 interventions how to negotiate. Furthermore, according to Schrumpf, Crawford, and Bodine (1997), the negotiation process is more difficult than the mediation process, because there is no neutral third party to assist and guide the process.

Problem solving negotiation skills are critical for all individuals to function interpersonally in ways that allow them to be contributing members of our society. Children and youth with challenging behaviors, or those with chronic problems with aggression or victimization, usually fail to engage in social problem solving negotiation. Such children and youth most frequently engage in the use of violence or force when they have a conflict with another person (Aber, Brown, & Jones, 2003; Dodge, 1993; Fontaine & Dodge, 2006; Schwartz, Dodge, Petit, & Bates, J. E., 2000; Strand & Nowicki, 1999). The purpose of this study was to investigate the effects of teaching elementary students with challenging behaviors a problem solving negotiation procedure on classroom
behavior and on the students’ use of conflict resolution strategies. I taught the students a
negotiation procedure within the context of a conflict resolution program developed by
Schrumpf et al. (1997). I also used some ideas from the conflict resolution programs written
by Bodine, Crawford, and Schrumpf (1994) and Johnson and Johnson (1995). I modified the
lessons and activities to accommodate the students’ needs as necessary. I had planned on
having a total of 16 lessons, but I was able to include the necessary content material within
twelve lessons---or sessions---in order to accommodate scheduling needs by covering
material from multiple lessons within my time frame.

Research Questions and Hypotheses

In order to explore the effects of teaching students with challenging behaviors a
problem solving negotiation procedure, I examined two primary questions in the study. The
questions were as follows:

(1) What is the impact of the negotiation instruction on the students’ use of
conflict resolution strategies?

(a) Will the use of problem-solving negotiations increase for the groups of
students receiving the instruction?

(b) Will the use of destructive, confrontational negotiations (forcing)
decrease for the groups of students receiving the instruction?

(c) Will the use of avoidant negotiations (avoiding) decrease for the
groups of students receiving the instruction?

Question 1 explored the impact of the negotiation instruction on the students’ use of conflict
resolution strategies. I hypothesized that problem solving negotiations would increase for the
students receiving the instruction, while negative confrontational negotiations (forcing) and avoidant negotiations (avoiding) would decrease.

(2) What is the impact of the negotiation instruction on student behaviors in the classroom?

(a) What is the effect of the negotiation instruction on the occurrence of verbal aggression in groups of students receiving the instruction?

(b) What is the effect of the negotiation instruction on the occurrence of physical aggression for groups of students receiving the instruction?

(c) What is the effect of the negotiation instruction on the occurrence of office referrals for disruptive behavior in groups of students receiving the instruction?

Question 2 investigated the impact of the negotiation instruction on student behaviors in the classroom. I hypothesized that the rates of verbal aggression, physical aggression, and office referrals for disruptive behavior would decrease for the students who received the problem solving negotiation instruction.

The importance of the direct instruction of strategies that can increase pro-social behaviors at the third tier of intervention cannot be overemphasized. While impact on academics and school attendance was not investigated in this study, I would like to note that with the current high stakes emphasis on academic performance and high school graduation rates, addressing the challenging behaviors of students needing tier 3 interventions is one of the rudimentary steps needed for students be able to apply more focus on academics and thus for schools to be considered successful.
Definition of Terms

The following operational definitions for terms were agreed upon by all participating adults in the study:

1. Physical Aggression: Includes fighting, punching, pushing, spitting, biting, pinching, scratching, kicking, throwing an object at a person, deliberately breaking any sort of object, touching, and self-harm. (Self-harm was counted as physical aggression due to the fact that it involves doing physical harm to oneself when one is angry versus negotiating. For example, punching a wall physically harms one’s hand and possibly one’s arm).

2. Verbal Aggression: Includes name-calling, swearing at a person, spreading rumors, teasing, yelling at a person, verbally threatening a person, rude hand gestures, “throwing gang signs,” and mumbling under breath with threatening facial expressions.

3. Avoidant (Avoiding) Negotiations: Negotiations are avoidant if they involve ignoring the conflict, pretending the conflict does not matter, withdrawing from the conflict situation, or giving in to the other individual(s) involved in the conflict. (I am using the broader term of avoiding negotiations in place of negotiations referred to as smoothing and withdrawing by Johnson and Johnson, 1995).

4. Forcing Negotiations (win-lose): Negotiations involve forcing if they were destructive or confrontational. Forcing negotiations are confrontational conflict resolution strategies used by individuals that involve pressuring others to submit to their demands (Johnson & Johnson, 1995). I would like to note
here, for purposes of clarification of definitions, that forcing negotiations were considered to differ from physical aggression in this study because one can negotiate using forcing without engaging in physical aggression. For example, a student might threaten the withdrawal of friendship if his friend won’t let him play with a toy first, or the student might get a teacher involved to attempt forced access to the toy, but physical aggression is not involved. In this study forcing may, in one sense, be viewed as a better behavioral choice than physical aggression. Because forcing is at least a negotiation strategy, one might even view it as a successive approximation of a behavior that is moving closer to problem solving because (in this study) it was not considered the same physical aggression.

5. Problem-Solving Negotiations (win-win): Problem-solving negotiations are conflict resolution strategies used by individuals to create mutually beneficial and satisfactory agreements (Johnson & Johnson, 1995).

6. Office Referrals for Disruptive Behavior: Any time a child is removed from the classroom, lunchroom, or recess and taken to an administrator or the crisis interventionist due to behavior that requires the teacher to stop instruction.

7. Prompt: A verbal or visual reminder to try to solve the problem or to engage in a desired behavior.

8. Daily Point Sheet: The daily point sheet is a behavioral rubric consisting of ten categories of desired classroom behaviors on which a student may receive a total of 5 points for each class period. The point sheets were already being used by all of the participating teachers prior to the study.
I would like to mention that in *Teaching Students to be Peacemakers*, Johnson and Johnson (1995) use the conflict resolution strategy terms of forcing, withdrawing, smoothing, compromising, and problem solving. I decided to use their two terms forcing and problem solving for my study, and used the term avoiding in place of withdrawing and smoothing. The term avoiding seemed to be more readily understood by the participating teachers, and I was not concerned about differentiating the strategy of compromising from the strategy of problem solving for this study. I would also like to note that other conflict researchers may use different resolution strategy terms. For example, Boland and Ross (2010) use the dichotomous terms escalating dispute resolution versus de-escalating dispute resolution in their research comparing the dispute resolution techniques of people with high and low emotional intelligence. Geiger and Fischer (2006) refer to the strategies of getting back and ignoring, used by 6th graders in their study who were identified as being verbally and emotionally abused by classmates. Deutsch (1993) refers to avoiding conflict and taking what he describes as hard and soft approaches to resolution that are either too aggressive or not assertive enough. Thus, various terms can be used to classify negotiation strategies.

Next, I will attempt to provide a pertinent, yet extensive, review of the literature in conflict resolution. I will address both conflict resolution’s theoretical framework and research in the pragmatic classroom application of conflict resolution.
CHAPTER 2
REVIEW OF THE LITERATURE

I will now provide an elaboration of the important knowledge bases that exist and have relevancy to this study. These knowledge bases are grounded in theories embedded in various areas of social and cognitive psychology that overlap with knowledge of group dynamics in sociology. I will begin with a brief look at the literature that clarifies the concepts of violence, aggression, and victimization, and present a discussion of conflict resolution style as coping via social problem solving.

Violence, Aggression and Victimization

Typically, when we hear the terms violence or aggression, we tend to associate them directly with physical violence. Of course, when we hear these words the term victim also comes to mind because one cannot have violence or aggression without a victim. However, physical violence is not the only form of aggression perpetuated against victims, specifically our children. Violence and victimization may take on non-physical forms. Blake, Kim, McCormick, and Hayes (2011) state that three subtypes of violence perpetrated by children among peers are present in the literature: “overt victimization, social victimization, and peer exclusion” (p. 56). Patfoort (as cited in Hakvoort, 2010, p. 160) refers to two systems within which people interact and describes them as being either violent or non-violent; Patfoort found by collecting stories from around the world, that the most common system of interaction in the world is the violent system. Furthermore, Patfoort (as cited in Hakvoort, 2010, pp. 160-161) states that the root of violence is relationships that have unequal power. Such imbalances of power can lead to violence and victimization.
Furthermore, Blake et al. (2011) note that the literature characterizes overt victimization to involve being the victim of physical aggression, while social victimization results when a child’s interpersonal relationships are attacked, and peer exclusion involves being socially rejected from a peer group and its activities. Like Blake et al. (2011), Hakvoort (2010) describes violence as both physical (direct violence) and violence that may manifest as the blocking of access to resources or protection (indirect violence). I believe for children, access to peer group inclusion may be considered a resource and the blocking of this access via exclusion may be considered indirect violence.

Considering the critical impact peer relationships and peer influence have on children, particularly when it comes to conformity, the importance of teaching problem solving negotiation skills as a coping strategy to both address victimization and resist the conflicts created by peer pressure is a salient issue. In order to grasp the powerful influence conformity has on children it is important to understand the concept of “normative regulation,” which is the definition, clarification, and maintenance or enforcement of the norms in a dyadic or group relationship (Brown, Bakken, Ameringer, & Mahon, 2008 p. 23). In their detailed description of the basic principals of peer influence, Brown et al. (2008) describe peer influence as multi-modal and multi-directional. In other words, there can be positive as well as negative peer influence, and dyads or groups of children have a reciprocal influence on one another. Thus, it would seem that the direct instruction of some form of problem solving negotiation strategy might serve to encourage positive, reciprocal peer influences, as well as to discourage those that are negative and victimizing.
Coping, Social Problem Solving, and Conflict Resolution

How is conflict resolution related to coping and how do we define coping and conflict? Frydenberg (1999) defines coping as consisting of an individual’s thoughts, feelings, and actions which are used to manage stressors. Interpersonal conflict occurs when the stressor of goal incompatibility is perceived to be present in a relationship, and the people involved engage in conflicting activities to obtain what they perceive to be different goals (Boardman & Horowitz, 1994; Johnson & Johnson, 2009a). Some describe conflict as emotional misunderstandings (Demoulin, Leyens, & Dovidio, 2009) as a result of misperceptions of behavior and differing perspectives between groups or individuals. These emotional misunderstandings negatively impact the parties’ ability to formulate peaceful resolution of conflicts.

Opotow and Deutsch (1999) recognize conflict resolution skill to be a coping strategy. The ability to positively resolve conflicts affects how well one copes with daily interpersonal stress. Based upon a perspective with roots in cognitive developmental psychology, individuals may be taught to create new, more functional cognitive coping structures through a process called accommodation. Through this process of accommodation, individuals may learn more positive ways to cope with conflict (Daunic, Smith, Robinson, Miller, & Landry, 2000).

Using the framework of Bandura’s social cognitive orientation of interpersonal conflicts, Vera, Shin, Montgomery, Mildner, and Speight (2004, pp. 73-74) note that it is important to understand the psychological variables that might influence which conflict resolution strategies a given student might develop and use to cope with social conflict. Bandura (2001) stresses the importance of the coping mechanism of human agency, which he
describes as the ability to control one’s life and connects that ability, or the blocking of it, with an individual’s choice of engaging in aggressive behavior, as well as developing an increased vulnerability to stress and depression.

Vera et al. (2004) emphasize the importance of the constructs of self-efficacy and self control in children’s choice of conflict resolution strategies. They define self-efficacy as the confidence a person has in their ability to be successful in a given context. Additionally, Vera et al. (2004, p. 74) note that, according to Bandura, a child will only resolve a social conflict without using violence or avoidance if the child has the confidence in his/her ability to cope successfully by doing so. Vera et al. (2004) found evidence that students’ beliefs in their ability to positively solve conflicts, combined with their ability to engage in self control, increased the likelihood that the students would use positive conflict resolution styles during social conflicts.

Self-efficacy is considered to be an important component of self-determination (Carter, Lane, Crnobori, Bruhn, and Oakes, 2011). Carter et al. (2011) reviewed a total of 81 studies that targeted the importance of teaching self-determination skills to students with challenging behaviors and deemed at risk for needing special education services. Among one of the important strategic components of these interventions was the instruction of social problem solving, though negotiation strategies were not specifically addressed.

Spraque and Walker (2000) and Opotow and Deutsch (1999) place conflict resolution instruction beneath the broader construct of social problem solving ability which also includes how well one makes decisions in social situations and how one responds to bullying, threats, and intimidation. Hune and Nelson (2002) and Anliak and Sahin (2010) view social
problem solving ability as synonymous with conflict resolution ability in separate studies they conducted involving preschool children.

Research based upon a social-information-processing model indicates that chronically violent, aggressive, and peer-rejected children have hostile attributional biases (Dodge, 1993; Strand & Nowicki, 1999), which interfere with their functional ability to cope with conflict. In other words, children with severe and persistent aggressive behavior misperceive the relationship goals of others to be hurtful to them in some way. As a result, these children are unable to effectively cope with conflict in a relationship. Furthermore, Fontaine and Dodge (2006) describe impulsivity as having an obvious negative impact on the ability to process social information, and it often determines whether or not youth choose an aggressive conflict resolution strategy versus a peaceful, pro-social strategy. Thus, without pro-social interventions, the dimension of impulsivity alone appears to interfere with a child’s ability to effectively and non-violently cope with social conflicts.

Dodge (1993) provides a detailed review of coping literature that specifically addresses the aggressive behavioral characteristics of children. Dodge (1993) describes 26 independent studies that found similar effects in children labeled as chronically aggressive as well as peer-rejected. These effects indicate that such children are frequently inaccurate in labeling emotions of others to be hostile when they are actually either benign or ambivalent. Coie and Dodge (as cited in Aber, Brown, & Jones, 2003, p. 325) reported that variables in the environment wield an “influence over aggressive behavior choices if one or more of the following three mental processes are affected: the perception of threat and experience of irritation and fear, the accessibility of aggressive responses in an individual’s memory, and the evaluation that aggression will lead to desirable positive consequences.” Thus, one can
deduce that if children have limited or no prior knowledge base of how to positively cope with conflict, they are more apt to use aggression or avoid coping with the conflict altogether, which may facilitate victimization via being excluded from desired peer groups.

Strand and Nowicki (1999) examined the nonverbal processing ability of 30 children diagnosed with conduct disorders who were living in a private residential treatment program. Children diagnosed with conduct disorders typically display externalizing behavior problems that include aggression. The children in treatment were matched with children without conduct problems, and not in treatment, on the basis of age, race, gender, IQ, and socioeconomic status. In their final analysis, Strand and Nowicki (1999) determined that children with conduct disorders were less accurate than their peers without conduct problems in determining adult affect in facial expressions and other children’s affect in voice tone. Similar to the findings of Dodge (1993) and Strand and Nowicki (1999) support the hypothesis that due to apparent deficits in nonverbal processing, children with conduct disorders are more likely to be unable to effectively cope with interpersonal conflict and thus engage in problematic interpersonal negotiation strategies. Furthermore, there is evidence that children and youth may perceive delinquent or violent behavior as being normative in a given social environment (Aber et al., 2003; Prentice, 2009). Within a school or a classroom, it is the responsibility of educators to foster an environment in which peaceful conflict resolution is normative versus victimization and violence.

A substantial body of evidence exists indicating that the way in which children negotiate to resolve conflict affects whether they are accepted or rejected by peers (Asher & Dodge, 1986; Bryant, 1992; Coie & Dodge, 1983; Leadbeater, Hellner, Allen, & Aber, 1989; Yeates, Schultz, & Selman, 1991). Positive peer relationships are extremely important to all
children, including those who are considered at risk for developing behavior problems, because research in resilience shows that friendship and belonging to positive peer groups has a protective effect against harsh home environments, bullying, and victimization, as well as promoting pro-social behavior (Allen, & Antonishak, 2008; Schwartz, McFadyen-Ketchum, Schwartz, Dodge, Petit, & Bates, 2000).

Using a sample of 200 children in grades 3 through 6, Asher and Dodge (1986) developed a socio-metric rating system to categorize children in school as being peer rejected, peer neglected, controversial, popular, or average. Rejected children are aggressive children for whom peers have a strong dislike and attempt to avoid. Peer neglected children are socially withdrawn and do not have many friends, but are not disliked by peers. Controversial children are aggressive but well-liked by peers possibly due to strong leadership ability. Popular children possess a variety of pro-social skills and are well-liked by many peers (Bryant, 1996; Dodge, 1983).

Bryant (1996) used the five socio-metric rating categories to investigate the relationship between the social status and conflict resolution strategies of 135 children in grades four through six. Results indicated that both peer rejected and controversial children preferred to use an aggressive, retaliatory conflict resolution strategy more than the children in the neglected, popular, or average categories. Furthermore, peer rejected children also preferred to use avoidance strategies to resolve conflict more than the children in the neglected, popular, or average categories. However, children in the popular category preferred to engage in calm discussion to resolve conflict even more than peers in the average category.
Bryant (1996) suggests that providing direct instruction of conflict resolution skills to students who prefer to engage in aggressive and/or avoidance strategies may prove helpful in encouraging pro-social peer relationships. Additionally, some argue that the direct instruction of social problem solving negotiations at the elementary level can decrease bullying and victimization at the high school level (Batsche & Knoff, 1994; Dwyer, et al., 2002). In their study of a sample of 152 seven-year-old children, Bonino and Cattelino (1999) found that children who were able to engage in flexible thinking, defined as being able to modify one’s perspective and see other perspectives, engaged in more cooperative problem solving strategies during interpersonal conflict. Based on their findings, Bonino and Cattelino (1999) suggest that cognitive instruction may be helpful in improving social skills of children. Nichols (2000) stresses the importance of assessing the cognitions and social perspectives of students with emotional and behavioral disorders and providing them with interpersonal problem solving instruction as a necessary intervention to target violent behavior.

Students with emotional and behavioral disorders frequently display persistent aggressive and disruptive behavior (Nichols, 2000). Such students are often referred to special education classrooms for students with challenging behaviors (also referred to as behavior disorders (BD) classrooms). Tier 3 interventions target students with the most severe aggressive and disruptive behavior, those who are often labeled as having BD. Students with such destructive behavior typically are a small minority of the student population and compose an estimated 1% to 7% of public school students (Colvin, Kameenui, & Sugai, 1993; Eber, Sugai, Smith, & Scott, 2002). However, these students are responsible for approximately 40% to 50% of significant behavioral disturbances in schools.
(Colvin et al., 1993; Dwyer et al., 2000). Since aggressive behavior tends to chronically occur among students in BD classrooms, certainly conflict resolution instruction may be an effective intervention.

**Theory and Elements of Conflict Resolution Instruction**

The basic premise of conflict resolution theory is the assumption that conflict is inherently positive. Conflict is positive when it is constructive versus destructive (Boardman & Horowitz, 1994; Fisher & Ury, 1991; Opotow & Deutsch, 1999). Conflict is constructive when it encourages individuals to use resolution strategies that develop creative ideas to solve problems and foster relationships; it is destructive when it results in resolution strategies that interfere with relationships or end with aggression and violence (Deutsch, 1993; Johnson & Johnson, 1996).

The roots of conflict resolution theory can be chronicled back to the gestalt psychologist, Kurt Lewin (Johnson, 2003; Johnson & Johnson, 2009a). Lewin (as cited in Johnson & Johnson, 2009a and Johnson, 2003) posited that social groups are both dynamic and interdependent in such a way that if one member of the group changes, then changes result in other group members and the group itself. As group members recognize the goals they have in common, they become motivated to work together toward the accomplishment of these common goals through a process called “positive interdependence” (Deutsch, 1993, p. 510; Johnson & Johnson, 2009a, p. 366). Morton Deutsch (2006), a student of Kurt Lewin, describes his theory of conflict resolution as it is commonly framed today by basing it upon both the constructs of cooperation and competition. Deutsch (2006) bluntly defines his theory in the following colloquial terms: “if you’re positively linked with another, then you sink or swim together; with negative linkage, if the other sinks, you swim, and if the other
swims, you sink (p. 24).” Thus, there is an existing interdependence that may be construed as either positive or negative.

Positive interdependence is present if one individual or group is able to achieve a given, desired goal only if the other individual or group can achieve its goal as well. Negative interdependence is present if one individual or group is only able to achieve a given, desired goal if the other fails (Deutsch, 2006; Johnson & Johnson, 2009a). Such linkage between individuals (or groups) is called social interdependence (Deutsch, 2006; Johnson & Johnson 2009a), and social interdependence is the very premise for all of the existing conflict resolution programs and strategies, including those that are school based, work based, community based, or government based. According to Deutsch (2006) it is the very existence of interdependence that fosters conflict. When there is no interdependence among individuals or groups, there is no conflict.

Because people are socially interdependent in various aspects of their lives, conflict resolution theory assumes it is possible for those involved in a dispute to reach agreements in which the needs or interests of all parties are satisfied, if they view themselves as problem solvers and reframe conflicts a mutual problems to be cooperatively solved by attempting to reach a wise agreement rather than as adversaries attempting to win an argument (Deutsch, 2006; Fisher & Ury, 1991; Johnson & Johnson, 2009a). According to Fisher and Ury (1991), agreements are wise when they attempt to meet the interests and needs of each disputant, are fair, and lasting. Such agreements come about non-violently and are referred to as integrative agreements because they integrate the needs of all parties to create a unique, solution to a conflict (Weitzman & Weitzman, 2006). Deutsch (2006) cautions that competitive attempts to solve conflicts via winning against the other, versus attempts at
cooperative problem solving that is needs based, results in destructiveness within the relationship and violence in some form.

Some theorists posit individuals have basic needs that must be considered during the resolution of any conflict. Four of these needs are belonging, power, freedom, and fun (Glasser, 1998; Schrumpf et al., 1997). Individuals meet their need for belonging by forming and maintaining relationships. Individuals meet their need for power by achieving goals. Being able to make choices allows individuals to meet their need for freedom. Finally, individuals meet their need for fun by engaging in playful behavior (Glasser, 1998; Schrumpf et al., 1997). According to Schrumpf et al. (1997), recognizing the need underlying any conflict is the first step to defining the problem, and problem definition is the first step toward creating a solution (or agreement).

Relevant to the concept of the human desire to meet these four needs, Johnson and Johnson (2006, p. 166) assert that there are two concerns when attempting to resolve a conflict. According to Johnson and Johnson (2006), the strategy a disputant chooses for reaching an agreement depends upon these two concerns: (1) the desire to maintain the relationship and (2) the desire to obtain goals. The degree of importance assigned to each of these two concerns will affect the strategy a disputant chooses to resolve the conflict.

Throughout the literature, researchers use different descriptors for conflict resolution strategies. However, regardless of the descriptors, most conflict resolution strategies fall into three basic categories: (1) win-lose, (2) avoidant, and (3) win-win (Bryant, 1992; Deutsch, 1993; Johnson & Johnson, 1996). Win-lose strategies are those that involve negotiating by using aggression or violence. Avoidant strategies are those which involve negotiating by avoiding the conflict altogether by either withdrawing from the other disputant or by
withdrawing from the conflict. Finally, win-win strategies are those that involve negotiating using problem solving and cooperation. Johnson and Johnson (1996) suggest there are two types of avoidant strategies: smoothing and withdrawal. When smoothing negotiations occur, one of the disputants gives up any hope of attaining his/her goal in order to maintain the relationship. When withdrawal negotiations are used, one or both of the disputants gives up their goals and their relationship. Furthermore, according to Johnson and Johnson (1996), win-lose strategies are more likely to occur when achieving the goal is more important than maintaining the relationship. Win-win strategies are more likely to occur when both achieving the goal and maintaining the relationship are important.

Deutsch (1993) suggests it is necessary to know the type of conflict in which one is engaged in order to choose the appropriate resolution strategy. Deutsch (1993, p. 512) describes three types of conflicts: (1) zero-sum, (2) pure cooperative, and (3) mixed-motive. In zero-sum conflicts, only one of the disputants can win. Disputants must, therefore, apply a win-lose strategy and attempt to somehow mobilize power and resources to aid them in winning. Pure cooperative conflicts are those in which both disputants can win or both disputants can lose. Finally, in mixed-motive conflicts, both disputants can win, both can lose, or only one can win. According to Deutsch (1993), lack of competent experience with resolving conflict leads individuals to mistakenly identify all conflicts as zero-sum, when in fact, most are mixed-motive. Deutsch and other theorists (Fisher & Ury, 1991; Johnson & Johnson, 1996; Schrumpf et al., 1997) assert that by teaching a cooperative, problem solving negotiation strategy (win-win), most conflicts can be resolved in a way that is beneficial to all disputants involved. In order to provide students with competent experience in conflict resolution, certain instructional elements must be present.
Bullock and Foegen (2002) identified five elements of conflict resolution instruction frequently recommended throughout the literature. These five elements are: (1) cooperative learning, (2) structured controversy, (3) group problem solving, (4) mediation, and (5) negotiation. The intent of this study is to focus on the element of negotiation and its possible effects on the behavior of students with BD. Therefore, I devote the majority of my discussion of the elements of mediation and negotiation as they have been applied to students with a high rate of behavior problems. However, first I will briefly address the other three elements, beginning with cooperative learning.

According to Johnson and Johnson (2006), cooperative learning is one of the most important steps in conflict resolution instruction. Bullock and Foegen (2002, p. 290) define cooperative learning as “a broad array of instructional strategies in which diverse groups of students teach each other and accept responsibility for their individual achievements as well as those of the peers in their group.” Deutsch (2006) states that people involved in disputes are more likely to be able to reframe conflicts as mutual problems to be solved if they follow eleven norms of cooperation. While I will not detail the eleven norms here, Deutsch (2006) basically describes these norms as “similar to those for respectful, responsible, honest, empowering, and caring behavior toward friends and group members.” Teaching students to work cooperatively is essential to teaching the importance of maintaining relationship in a conflict while at the same time achieving a goal. However, schools and other organizations tend to emphasize competitive goal attainment, which can impede the nonviolent resolution of a conflict (Deutsch, 1993; Opotow & Deutsch, 1999). Though Johnson and Johnson (2006; 2009a) note the application of cooperative learning in schools has successfully become more widespread, they continue to emphasize the need for our society to
institutionalize what they call consensual peace. Such consensual peace can only be taught through public schools that have adopted a cooperative learning paradigm in their daily functioning for both students and staff (Johnson & Johnson, 2006).

A second element of conflict resolution instruction is structured, constructive controversy. Deutsch (2006) defines constructive controversy as being “when one person’s ideas, information, conclusions, theories, and opinions are incompatible with those of another, and the two seek to reach an agreement (pp.70-71).” In order to implement a lesson that uses constructive controversy, teachers must assign students a controversial topic to discuss. Next, teachers must tell the students to develop an opinion about the resolution of the controversy, and then teachers instruct the students to engage in perspective taking to create cognitive uncertainty, and hopefully a creative resolution (Johnson & Johnson, 2009b).

According to Johnson and Johnson (1997; 2009b), encouraging students to engage in constructive controversies within a cooperative environment can promote creative problem solving and conflict resolution through perspective taking, cognitive rehearsal, and the use of higher order thinking skills. Additionally, Johnson and Johnson (2009b, p. 41) state that when uncertainty about one’s original conclusions occurs, “epistemic curiosity” happens, so the learner then engages in a search for more information and new experiences to resolve the uncertainty and therefore develops new, more unique solutions. In their meta-analysis of 39 studies over a 40 year time period, Johnson and Johnson (2009b) concluded that the use of structured disagreements resulted in higher quality solutions to problems and increased understanding of a variety of perspectives, as well as increasing liking and interpersonal attraction among participants, including those with different perspectives.
A third element of conflict resolution instruction is group problem solving. According to some conflict resolution theorists (Bodine, Crawford, & Schrumpf, 1994; Fitzell, 1997), students can be taught to engage in group problem solving through the use of the class meeting process developed by William Glasser (1965). The main purpose of class meetings is for an entire class of students to practice communication skills as well as non-judgmental perspective taking to resolve conflicts (Bullock & Foegen, 2002; Fitzell, 1997).

The fourth and fifth elements of conflict resolution instruction according to Bullock and Foegen (2002) are mediation and negotiation. Mediation and negotiation are closely related. Negotiation is a discussion with another person in order to reach an agreement about a solution to a problem (Schrumpf et al., 1997). Negotiation using discussion to reach a mutually satisfactory agreement is referred to as problem solving negotiation. Mediation is problem solving negotiation with the help of a third party. Many public schools have created peer mediation programs in an attempt to have students act as mediators for classmates engaged in a dispute (Long, Fabricius, Musheno, & Palumbo, 1998). Some of these programs, such as Johnson and Johnson’s (1995) Teaching Students to be Peacemakers Program, emphasize training the entire student body to be mediators within the context of teaching a conflict resolution curriculum. Other programs emphasize training only a cadre of students within a school. In the cadre approach, peer mediators often wear shirts or caps or are identified in some other special way in order to make it easy for disputing students to find them. Thus, the cadre approach results in the creation of a student subgroup that is understood to possess special skills and roles, so the power is shifted from school staff to a selected group of students (Sellman, 2011). While such a power shift may not necessarily result in the creation of a kind of competitive, subgroup entitlement, I do believe it is a
possible concern presented by the cadre approach, particularly, since one of the main considerations of constructive conflict resolution is equalizing power and giving up control (Deutsch, 2006).

Both peer mediation and problem solving negotiation are typically taught within the broader context of a conflict resolution curriculum. While there is some variability of content in conflict resolution curricula, most include activities designed to teach the concept of conflict, social problem solving and decision making procedures, perspective taking, cooperation, self-control, responses to diversity, and effective, non-violent communication (Daunic, et al., 2000; Johnson & Johnson, 2006; Jones & Bodtker, 1999). According to Bodine and Crawford (as cited in Hakvoort, 2011) peer mediation and negotiation may be taught either outside of regular classroom time, as a separate course, or embedded in the daily curriculum. Conflict resolution programs that are taught to entire classrooms or student bodies are referred to as universal programs.

**Procedural Justice and Conflict Resolution**

I would like to briefly address the concept of procedural justice and its importance in the resolution of conflict. There are two different types of justice recognized in the literature: distributive and procedural (Beersma & Dreu, 2003; Fondacaro, Brank, Stuart, Villanueva-Abraham, Luescher, & McNatt, 2006; Stuart, Fondacaro, Miller, Brown, & Brank, 2008). Fondacaro et al. (2006, p. 987), describe the two types as follows: “While distributive justice refers to the fairness of a decision’s outcome, procedural justice refers to the fairness of the procedures used to arrive at the decision.”

Research has shown that it is important for disputants to feel they are given a voice and clearly participate in the steps of the process of resolving a conflict to formulate an
agreement (Beersma & Dreu, 2003; Fondacaro et al., 2006; Stuart et al., 2008). For children and adolescents in particular, procedural justice is especially critical. There is evidence that adolescents whose parents include them in the step-by-step process of resolving a conflict and creating an agreement are less likely to become involved with negative peers and more likely to experience family cohesion (Fondacaro et al., 2006; Stuart et al., 2008). Beersma and Dreu (2003) found that individuals willing to engage in cooperative, pro-social behaviors versus self-centered behaviors were more likely to both experience procedural fairness and engage in the formulation of an integrative agreement. One may then conclude that the concepts of both cooperation and procedural justice are critical to the non-violent resolution of conflict, and encourage the instruction of conflict resolution in schools.

**Peace and Levels of Conflict Resolution**

I will now take the opportunity to address the three levels of peace that are differentiated in the literature: peacekeeping, peacemaking, and peacebuilding (Hakvoort, 2011; Johnson & Johnson, 2005). Johnson and Johnson (2005) view peacekeeping as peace that is imposed, and not a peace that has resulted in an integrative agreement in which the needs of all disputants have been creatively addressed with the outcome being a novel solution. In other words, imposed peace may be thought of as forced peace. Peacemaking happens when negotiation or mediation occur---or during a ceasefire (Hakvoort, 2011; Johnson & Johnson, 2005). Peacebuilding “deals with the structural issues and is aimed at creating long-term harmonious relationships based on mutual respect and social justice (Johnson & Johnson, 2005, p. 283).” One might construe then, that peacebuilding within the context of a school environment may be thought of as including the sum total of all positive behavioral supports used, as well as the implementation of any conflict resolution education.
Cohen (as cited in Hakvoort, 2011, p. 162) views conflict resolution in schools as existing within a four level system depicted as a pyramid. The first, and broadest, level is referred to as “prevention,” which consists of a school environment that supports peaceful relationships; the second level is referred to as “conflict handling,” which is the resolution of conflicts via negotiation; the third level is called “help,” which is mediation; and the fourth, narrowest, level is called “stop,” in which conflicts are not resolved but rather arbitrated by separating the disputants. Johnson and Johnson (2005) would refer to the Stop level as peacekeeping or imposed peace. Hakvoort (2011) argues that while imposed peace should be used sparingly and as a last resort, it is sometimes necessary. Hakvoort (2011) also argues that Cohen’s conflict pyramid can be viewed as a way to determine which type of conflict resolution approach is best to use within a given context based on structures and needs of schools and students, while keeping in mind that the application of different levels may occur simultaneously.

A large number of schools are choosing to implement conflict resolution programs in efforts to decrease and prevent violence among students, yet few schools measure their effectiveness (Shuval, Pillsbury, Cavanaugh, McGruder, McKinney, Massey, & Groce, 2010). Some of these programs focus on the first level of the conflict pyramid, prevention, and consist of teaching general conflict resolution skills, such as interpersonal skills like anger management, while others focus on either negotiation or mediation. Surprisingly, few studies address the implementation and outcomes of using negotiation or peer mediation with students who have such challenging behaviors that they are entitled to the services of special education.
Perhaps one of the largest bodies of literature in the conflict resolution field focuses on the application of the third level of the conflict pyramid, mediation, or more specifically, peer mediation programs. Some of the literature describes quasi-experimental studies of peer mediation, while others give anecdotal accounts, and still others provide empirical information for outcomes of peer mediation programs. In the following section, I will describe existing information on peer mediation based upon empirical research.

**Peer Mediation Research**

Johnson and Johnson (1998) give a synopsis of more than fourteen studies they have completed on the effects of training elementary, middle, high school, and college students to use mediation and problem solving negotiation with their Teaching Students to be Peacemakers Program. The studies typically lasted several months to an entire year and included both urban and suburban school settings with children from a variety of backgrounds. In their synopsis, Johnson and Johnson (1998) concluded that after the training, students experienced an increased ability to manage conflicts without the help of adults, successfully acquired and retained sufficient knowledge about the negotiation or mediation procedures, and generalized the knowledge across people and settings. Johnson and Johnson (1998) further explain that discipline problems requiring teacher involvement decreased by 60 percent after training, while administrative referrals decreased by 95 percent. Johnson and Johnson (1998) also report that after training students displayed more positive attitudes toward conflict and toward school staff. Johnson and Johnson (1998) describe their studies as including diverse groups of students some of whom were identified as delinquent, but all students were in general education programs.
Aber, Brown, and Jones (2003) evaluated the effects of a school violence prevention program called Resolving Conflicts Creatively which implements a peer mediation piece and includes the two main components of teacher training and periodic teacher coaching during implementation, as well as classroom instruction of conflict resolution provided by the trained teachers. A total of 11,160 students in first through sixth grades were included in the study, which lasted over a period of two years. Aber et al. (2003) found that students whose teachers both taught the greatest number of conflict resolution lessons and needed the least amount of coaching experienced decreases in hostile attribution bias, aggressive interpersonal negotiation strategies, conduct problems, depression, and fantasies about aggression, as well as experiencing an increase in what they termed competent interpersonal negotiation strategies. However, students of teachers who needed a lot of coaching in the program’s implementation or did not teach as many conflict resolution lessons did not experience the same positive outcomes.

Hessler, Hollis, and Crowe (1998) completed interviews with fifty trained student mediators in fifth and sixth grade general education classrooms in three elementary schools to investigate their perceptions about the mediation program. Hollis et al. (1998) concluded that the mediators’ perceptions of the program were positive, and their intent for participating in the program was one of wanting to help.

Humphries (1999) included 18 students in fourth, fifth, and sixth grade general education classrooms in a conflict resolution training program to explore how the student mediators applied the mediation process and examine their perceptions of the program. Humphries (1999) found that 64% of the children were able to correctly remember and
implement the mediation process, and 93% of the children were satisfied with the mediation process itself.

I have identified only two studies that examined the use of mediation with students having disabilities. Kirleis (1995) and Jones and Bodtker (1998) conducted research to investigate the effects of peer mediation and conflict resolution instruction on students in certain special education programs. Kirleis (1995) investigated the effects of a 12-week peer mediation training on eight high school students identified as having emotional disturbance. Both teacher and student perceptions of the training program and its effects were positive. Additionally, administrative referrals for discipline problems decreased. Jones and Bodtker (1998) studied the effects of a 12-week peer mediation and conflict education curriculum on 160 students in a private school for children with special needs. The students ranged in age from five through twenty-one and were identified as having either learning disabilities, emotional disturbance, behavior disorders or some combination of these disabilities. Similar to Kirleis (1995), Jones and Bodtker (1998) reported a decrease in seriously destructive, aggressive behavioral occurrences based on filed incident reports. Interestingly, however, the number of less serious disruptive behaviors (e.g., teasing and refusal to follow directions) increased. Also, while there was an increase in positive perceptions of school climate by the younger students, the older students did not significantly change their perceptions of the school climate.

**Differing Perspectives**

Some researchers have urged caution in the non-critical advocacy of peer mediation programs (Lindsey, 1998; Long et al., 1998). Much of the peer mediation research has been based upon non-experimental and quasi-experimental research design focusing on the
frequency with which peer mediators are able to encourage disputing classmates to reach agreement and perceived student and staff satisfaction with the peer mediation program (Long et al., 1998). Many of the agreements formulated by the student mediators with their disputing classmates are agreements for the disputants avoid each other (Johnson & Johnson, 1995; Long et al, 1998). Certainly, avoidance is preferable to aggression; and as noted by Harkvoort (2010), there are times when it is appropriate for educators to step in and stop a conflict by enforcing a mandatory separation of the disputing students. However, avoidance hardly results in problem solving and real conflict resolution. Sellman (2011) found that getting staff to modify their attitudes toward maintaining power and control over students can be problematic for some schools attempting to implement peer mediation programs.

Furthermore, Long et al. (1998) studied the actual program effects of peer mediation and found little school-wide generalization of pro-social behaviors.

Long et al., (1998) studied forty-three students in third, fifth, seventh, and eighth grades in both an elementary school and a middle school located in the inner-city to determine the effects of peer mediation training on the affective constructs of self-esteem, empathy, perspective taking, and cognitive ability to understand conflict. Student mediators at the fourth and fifth grade levels were almost twice as likely to formulate agreements resolving conflict by avoidance than were their sixth, seventh, and eighth grade counterparts who exhibited more mature perspective-taking behavioral patterns. Additionally, data indicated the number of conflicts reached a peak in the fourth grade and consistently decreased through each consecutive grade. Student mediators at all grade levels showed no significant changes in self-esteem, empathy, or cognitive ability to understand the conflict situation. Though fifth grade mediators displayed significant improvement in perspective-
taking. Long et al. (1998) suggested the reason for the limited positive effects of the mediation training was due to the possibility that the creative problem solving requirements of mediation are beyond the cognitive capacities of young children. Certainly, researchers must continue to empirically explore the effects of peer mediation programs in order to more clearly interpret their social and educational implications.

One must also consider that the impact of the specific conflict resolution skills taught within peer mediation programs may have as much or more effects on conduct problems and pro-social student interactions as the peer mediation itself. A wide variety of evidence-based violence prevention programs and interpersonal problem solving skills programs currently exist (Anliak & Sahin, 2010); yet many of these do not use peer mediation, and some of the studies have reported their success in decreasing school discipline problems, while others have had less positive reports (Anliak & Sahin, 2010; Flannery et al., 2003; Shuval et al., 2010; Vazsonyi, Belliston, & Flannery, 2004).

For example, Aniak and Sahin (2010) implemented the violence prevention program I Can Problem Solve (ICPS) which includes 83 interpersonal problem solving lessons with 83 pre-school students, who were ages five through six. Using the Drexel Early Childhood Behavior Rating Scale, results of the implementation indicated a significant improvement on pro-social and introverted behaviors for the children in the experimental group when compared to the children in the control group. However, Aniak and Sahin (2010) reported no statistically significant improvement in aggression, though mean scores did indicate a positive change. Shuval et al. (2010) reported mixed violence prevention effects from a study they conducted that implemented a universal conflict resolution curriculum developed by a local community based mediation organization to teach 191 elementary students conflict
resolution skills in a series of five workshops. The program focused on teaching students to resolve conflicts by making non-violent choices and preventing both verbal and physical conflict before it begins. Shuval et al. (2010) speculate possible reasons for the intervention’s limited impact could have been the short duration of training, the focus of the intervention, or the fact that the program was universally implemented to all students versus only those students with higher risk, and thus had less remarkable baseline scores.

There is evidence to support the speculation that intervention effects of conflict resolution instruction might be greater for students at higher risk for aggression. When the universal violence prevention program called Peace Builders was implemented with 2,380 children in kindergarten through fifth grade, researchers found the intervention decreased aggression and increased pro-social behaviors significantly more in children in grades 3-5 considered to be at high risk for violent behavior than those considered to be at low or medium risk. Additionally, there were different intervention effects depending on grade level, with children in grades K-2 showing no differential intervention effects based on their risk category for aggression. Also, intervention effects were found to be greatest for the first wave of students who received the conflict resolution intervention immediately following baseline than for the wave of students receiving the intervention a year after baseline (Flannery et al., 2003; Vazsonyi et al., 2004).

Exploring Negotiation

If there is mixed evidence regarding the pro-social effects of the element of peer mediation and other conflict resolution interventions, then what about the specific element of problem solving negotiation? Is there evidence that the direct instruction of a problem solving negotiation procedure can positively affect student behavior? Weitzman and
Weitzman (2006) state that people resolve conflicts two ways: by solving a problem together or by making a decision together. They describe problem solving as “the process of diagnosis and development of alternatives (p. 197).” While all conflict resolution programs include problem solving as a component, little focus has been on problem solving specifically to teach the negotiation of integrative agreements to students with challenging behaviors.

Leadbeater et al. (1989) studied the interpersonal negotiation strategies of 150 males and 121 females, ranging in age from 14 to 18, who were identified as being delinquent, runaways, or from low socioeconomic groups. Leadbeater et al. (1989) found a moderately positive correlation between both the males’ and females’ use of problem solving negotiation strategies and social skills. The youths who most frequently engaged in problem solving negotiations displayed more positive social skills and fewer problem behaviors such as delinquency or drug use.

Yeates et al. (1991) report similar findings on the positive effects of problem solving negotiations in their two studies of the interpersonal negotiation strategies of elementary children. The first study included 46 students from third, fourth, and seventh grade general education classes with three of the students spending a small amount of time in a special education classroom. The second study included 49 students from third, fourth, and fifth grade general education classes and was conducted to replicate the first study. In the first study, Yeates et al. (1991) found a weak correlation between students’ use of problem solving interpersonal negotiation strategies and their social status; while in the second study, they found a stronger correlation between the two. Furthermore, the older students engaged in problem solving negotiations more frequently than the younger students.
Hune and Nelson (2002) used an A-B single subject design to investigate the effects of teaching four preschool children a problem solving negotiation strategy to resolve conflict. The preschool children assigned to treatment group conditions were in a Head Start program in two different classrooms and had been observed by their teachers to engage in high rates of aggressive behavior. Additionally, the researchers conducted probes and direct observations of four preschool children who did not receive the instruction but who had characteristics similar to the children in the treatment group.

Four preschool children in the treatment group received the problem solving instruction in 10-minute sessions of small group rotations. The problem solving instruction involved presenting stories with themes focusing on a protagonist faced with an interpersonal conflict. Hune and Nelson (2002, p. 189) taught the students to use the following four-step problem solving process to resolve the conflicts in the stories: (1) Decide what the problem is, (2) Think of different ways to solve the problem, (3) Say or do one thing, (4) See how your friend feels. Examples of pro-social responses to the resolution of the conflict were modeled for the students during instruction and picture prompts for each step of the problem solving procedure were provided.

Hune and Nelson (2002) reported that the post-treatment group students were able to generate more pro-social solutions to interpersonal conflicts in subsequent stories than the students not receiving the instruction. However, post-treatment group students had to be prompted to remember the steps in the problem solving procedure in order to generate more pro-social solutions. Though aggressive classroom behaviors occurred at lower levels of frequency in post-treatment group students, the behavioral topography remained unchanged. For example, a student who displayed physical aggression before the instruction still
displayed physical aggression after the instruction---just not as often. Teacher ratings indicated that post-treatment group students displayed minor gains in social skills but little improvement regarding problem behaviors.

Certainly, the Hune and Nelson (2002) study indicates possible benefits of teaching problem solving negotiation to students with aggressive behavior. However, the effects of the instruction were not dramatic. Aggressive behavior continued and students required prompting to use the problem solving negotiation strategy. As mentioned earlier, the ICPS program was found to have positive intervention effects for increasing pro-social behaviors but less significant effects for decreasing aggressive behaviors, though negotiating integrative agreements was not a focus of the intervention.

I will next describe and discuss the research I did to investigate the effects of implementing a problem solving negotiation intervention that taught students with challenging behaviors how to negotiate integrative agreements. Since a clear gap in the research base exists in the area of teaching problem solving negotiation strategies to such students, I felt the study was both timely and pertinent. The study contributes to the existing knowledge found in the literature by investigating both the impact of negotiation instruction on the conflict resolution strategies students with challenging behaviors choose, as well as investigating the impact of negotiation instruction on targeted student behaviors in the classroom.
CHAPTER 3

METHOD

In this study, I investigated the effects of teaching six elementary students with challenging behaviors a problem solving negotiation procedure on rates of verbal aggression, physical aggression, office referrals, and students’ use of conflict resolution strategies. I used a multiple baseline design across settings to implement the study.

Setting and Participants

Setting

The participating elementary school had approximately 325 students and was one of seven elementary schools in the town’s school district. Total enrollment of the school district at the time of the study was 4,725 students. The school was located in a mostly middle-class, Midwestern, college town.

Participants

Teachers. The participating educators were three teachers each having one assistant, and a crisis interventionist (CI) who also had an assistant. The three teachers had students assigned to their classrooms by both level of severity and grade level. The reader should note that I used pseudonyms for all staff and student names mentioned in this study. Ms. Lang was responsible for the students in third through fourth grade with moderate to severe challenging behaviors, and Ms. Tice was responsible for the students in fifth through sixth grade with moderate to severe challenging behaviors. Finally, Ms. Smit was responsible for the students in third through sixth grade with moderate challenging behaviors. Severity levels of student behaviors were defined by their Individualized Educational Programs (IEP). Students whose IEP reflected less severe behaviors, received more inclusive instruction in
general education classroom settings. Teachers provided instruction in all academic areas, and students also received instruction in art, music, physical education, keyboarding, and social skills.

The role of the CI was somewhat administrative. The CI provided positive behavioral support ideas for the teachers and crisis management support, as well as social skill support, for the students. Once a week the CI would lead a social skills class that included giving students instruction and practice in working in cooperative learning groups, teaching students to non-violently address other students with whom they had a conflict by stating the reason they were angry and receiving and accepting an apology, or providing students with structured praise and tangible rewards for pro-social behaviors in a formal “awards ceremony.” The CI did not have a classroom per se. Her duties also specifically included co-teaching the weekly social skills session with the teachers and assisting students in classrooms who were displaying aggressive behaviors or having unresolved conflicts with teachers or other students.

The teachers had master’s degrees and several years of teaching experience. Years of experience ranged from eight years to thirteen years. Their experience was exclusively in working with students with BD. The CI had experience in both teaching and behavioral de-escalation strategies.

**Students.** All kindergarten through sixth grade students in the school district who were identified as having moderate to severe challenging behaviors, according to state guidelines, attended the district program for students with behavior disorders which was located in the participating elementary school at that time. The curriculum of the program had both an academic and a social skills focus. The students identified as having moderate
challenging behaviors received most of their academic instruction through special education, but they also received instruction for one or more classes in a general education setting. However, the students identified as having severe challenging behaviors received all of their academic instruction through special education. The students in the program were placed on a point system. Points could be used by students to gain access to both privileges and tangible reinforcements.

The students with challenging behaviors who were in the K-2 classroom were not included in the study, based upon concerns that the lesson plans used in the problem solving negotiation instruction would not be appropriate for them. Furthermore, other students were excluded due to lack of informed consent, unexpectedly moving, or the possibility that they would move during the study. A total of eight students in the program actually participated in the study.

Of the eight participating students, six received free/reduced lunch. One of the students was of mixed race, and seven of the students were white. Six of the students were male and two were female. At the beginning of the study, students ranged in age from nine to 12 years and were in grades three through six. Academic skill levels of the students were determined by a number of assessments such as progress monitoring and Iowa Test of Basic Skills.

The participating students in Ms. Lang’s class, the first treatment group, were Cain, Rose, and Judd. Cain was age 10 and in the fourth grade at the beginning of the study. Ms. Lang reported Cain’s reading skills to be at a third grade level, his written expression skills to be at second grade level, and his math skills to be at a third grade level. Cain’s challenging
behaviors included stealing, refusal to follow directions, verbal aggression, and physical aggression.

Rose was age nine and in the third grade. Ms. Lang reported Rose’s reading skills to be at the second grade level, her written expression skills to be at a first grade level, and her math skills to be at a first grade level. Rose’s challenging behaviors included refusal to follow directions, difficulty remaining on task, tantrums, verbal aggression, and physical aggression.

Judd was age 10 and in fourth grade. Ms. Lang reported Judd’s reading skills to be at a fourth grade level and his written expression skills to be a second grade level. Ms. Lang reported a discrepancy between Judd’s math computation skills and his math problem solving skills. While Judd’s computation skills were at a fourth grade level, his problem solving skills were only at a first grade level. Judd’s challenging behaviors included refusal to follow directions, difficulty remaining on task, verbal aggression, and physical aggression.

The participating students in Ms. Smit’s class, the second treatment group, were Tim, Alan, and Norm. At the beginning of the study, Tim was age 10 and in the fourth grade. Ms. Smit reported Tim’s reading skills were at the seventh grade level, and his written expression and math skills were at a fourth grade level. Tim’s challenging behaviors included refusal to follow directions, difficulty remaining on task, verbal aggression, and occasional physical aggression.

Alan was age nine at the beginning of the study and in the fourth grade. Ms. Smit reported Alan’s reading skills were at the seventh grade level, and his written expression skills and math skills were at the fourth grade level. His challenging behaviors included
refusal to follow directions, difficulty remaining on task, verbal aggression, and occasional physical aggression.

Norm was age eleven at the initiation of the study and in the fifth grade. Ms. Smit reported Norm’s reading skills to be at the second grade level, his written expression skills to be at the first grade level, and his math skills to be at the third grade level. Norm’s challenging behaviors included refusal to follow directions, difficulty remaining on task, verbal aggression, and occasional physical aggression.

The participating students in Ms. Tice’s class, the third treatment group, were Cary and Ann. At the initiation of the study, Cary was age twelve and in the sixth grade. Ms. Tice reported Cary’s reading, written expression, and math skills all were at the third grade level. Cary’s challenging behaviors were refusal to follow directions, difficulty remaining on task, tantrums, stealing, verbal aggression, and occasional physical aggression.

Finally, Ann was age twelve and in the sixth grade at the beginning of the study. Ms. Tice reported Ann’s reading and written expression skills were at the sixth grade level, and her math skills were at the fourth grade level. Ann’s challenging behaviors included verbal aggression and physical aggression. All participating students had problems interacting with peers. I must mention here that though Ms. Tice’s students did participate in the study, their data were excluded from the final analysis due the fact that Ms. Tice suffered serious health problems that made the accurate gathering of data extremely difficult. Thus, the final data analysis included the six students described in Ms. Lang’s and Ms. Smit’s classes.

Teacher Recruitment and Training

Because social skills instruction is a crucial component of a program for students with BD, the school district, principal, and teachers were positive about providing the students
with the opportunity to participate in the study. I first met with the district curriculum
director to ensure the proper human subjects procedures would be followed and IRB
approval would be obtained. After obtaining IRB approval from the Iowa State University
Human Subjects Research Office (Appendix A), I scheduled a meeting with the participating
teachers, assistants interested in attending, the CI and the school principal on November 14\textsuperscript{th}
to discuss the procedures of the study.

During the informational meeting, I addressed the following:

1. Incentives for participating teachers and students
2. Overview and procedures of the instruction and the study
3. Data collection procedures
4. Estimated timeline for the study
5. Inter-rater reliability checks
6. Treatment fidelity checks
7. Training in operational definitions
8. Obtaining informed consent.

During the meeting, the CI and the teachers decided that it would be best if the CI took
responsibility for talking to the students and calling the parents to explain the study. The CI
also agreed to be responsible for distributing the letters of informed consent to both the
students and the parents and getting them back. A copy of the IRB approved student and
parent letter of informed consent may be found in Appendix A.

On November 20\textsuperscript{th}, I trained the teachers, the CI and a teaching assistant in using the
operational definitions and in the data collection procedures. The teacher training lasted
approximately one and a half hours and consisted of instruction on three topics: operational
definitions, negotiation strategy instruction, and data collection procedures.

As I noted and defined in the introduction, there were eight terms requiring
operational definition in the study: physical aggression, verbal aggression, avoidant
negotiations, forcing negotiations (win-lose), problem solving negotiations (win-win), office
referrals for disruptive behavior, prompt, and daily point sheet. The instruction in the
operational definitions of these terms involved giving each training participant a written copy
of the researcher’s operational definitions and discussing any questions, and then making any
modifications to the definitions. For example, the teachers and CI asked how to code any
forms of unwanted touching, and it was decided to code them as physical aggression. Also,
the question arose as to how to code rude hand gestures and “throwing gang signs.” We
decided to code such gestures as verbal aggression. The teachers and CI already knew the
operational definition for daily point sheet because the daily point sheet was developed by
them to use as part of the department’s behavior management program.

Though the three negotiation strategy categories used in this study were part of the
operational definitions, I felt the teachers needed practice classifying actual student behaviors
as forcing, avoiding, or problem solving. Initially, I attempted to use a CD-ROM based
computer program that illustrated students engaging in avoiding, forcing, and problem-
solving interactions. However, the computers in the classrooms were too old for the CD to
work in them, so instead I modeled, role-played, and gave examples of interactions involving
each type of negotiation strategy. Next, I used a series of negotiation strategy vignettes
(Appendix B) to assess the extent to which the teachers, CI, and assistant understood the
strategies. It should be noted that the three teachers and CI had participated in a previous
conflict resolution training session that I had provided for some members of the school district; thus, they were already familiar with the negotiation strategy terminology. I instructed the trainees to read each of the vignettes and code the conflict resolution (negotiation) strategies used in them. All trainees correctly coded 100% of the vignettes.

Finally, I provided instruction on data collection procedures. I gave each teacher a copy of the Daily Behavioral Observation Recording Sheet (Appendix C) and told her to record a simple tally each time one of the targeted behaviors occurred. The duration of the observations was the entire school day. Given the existing data collection structures of the program, which required the teachers and the CI to maintain continuous progress monitoring on student behaviors, the teachers were easily able to incorporate the observations for the study into their daily routine.

Additionally, I explained that I would be conducting inter-rater reliability checks every two weeks and that the procedure would be for me to come at the beginning of a class and give the recorder (teacher) a colored pen to use for making the tallies during the time she was conducting the reliability check. The trainees decided they preferred to maintain a Daily Behavioral Observation Sheet for each individual student and write the dates in the margin to the left of the column for the student’s name. The session ended with a question and answer period during which I provided clarifications about the study.

Clarifications included reviewing the operational definitions, determining that the CI would collect the data sheets each Wednesday and have them ready for me to pick up in her office, deciding on the most convenient time each week to collect the points recorded on the students’ daily point sheets, and agreeing to begin the baseline data collection for the study on December 2nd and to end all data collection on April 18th. Additionally, the trainees and I
agreed on incentives for the participating teachers and students. I provided each participating teacher with a $25 gift certificate for classroom materials and substituted for them one day each during the month of May. Participating classes were provided a pizza party and a conflict resolution certificate upon completing the lessons.

**Research Design**

I chose a multiple baseline design across settings for two reasons. First, I was interested in investigating the behavioral effects of teaching the conflict resolution strategy of problem solving to students with moderate to severe challenging behaviors. Classrooms serving students with moderate to severe challenging behaviors typically have a small number of students, so conducting a more traditional study with a control group and treatment group can be very difficult. Second, both I and the school district in which I performed the study considered the multiple baseline design to be the most practical research design to use because there is no withdrawal of the intervention. According to Kazdin (1982) and Riley-Tillman and Burns (2009), multiple baseline designs across individuals and settings measure the effects of an intervention by introducing it at different phases of the study. Furthermore, Kazdin (1982) and Riley-Tillman and Burns (2009) state that since the researcher varies the timing for introducing the intervention across individuals or settings, if the baselines change each time the intervention is introduced, the consequent effects may be determined to be caused by the intervention rather than by confounding variables external to the intervention.

**Materials**

I used and adapted much of the conflict resolution curriculum in Schrumpf et al.’s (1997) *Peer Mediation: Conflict Resolution in Schools* to create 12 lessons to teach the
students the negotiation strategy of problem-solving. I used many of the activities included in the curriculum, as well as some information from Bodine et al.’s (1994) Creating the Peaceable School, terminology information I have already mentioned from Johnson and Johnson’s (1995) Teaching Students to Be Peacemakers, the book named The True Story of the Three Little Pigs (Scieszka, 1989), and some of my own activities. The terminology and information on basic needs in the lessons is based on Glasser’s (1998) work.

I designed each of the 12 lessons to be approximately 60 minutes in length to correspond as closely as possible to Schrumpf et al.’s (1997) recommended minimum 12 hours of training. As mentioned earlier, I had planned on designing 16 lessons, but I was able to include all of the necessary information in 12 lessons. All lessons contained instruction of the following six problem-solving negotiation steps and skills related to communication described by Schrumpf et al. (1997, p. 225):

Step 1: Agree to solve the problem.

Step 2: Share points of view.

Step 3: Say what I need and why.

Step 4: Think of ideas and share them. Listen to other ideas.

Step 5: Ask which ideas are fair.

Step 6: Agree on a fair idea.

I modified the wording in the negotiation steps described by Schrumpf et al. (1997, p. 225) to make it clearer for the students to understand since they all had special learning needs. Furthermore, during the lessons, I had each step written on a brightly colored, laminated piece of paper and coded with a Boardmaker (by Mayer-Johnson) picture in an attempt to facilitate memorization of the steps. Boardmaker (by Mayer-Johnson) is a
computer program that creates line drawings and images to facilitate communication for students with disabilities. I did not use the Boardmaker (by Mayer-Johnson) pictures for communication purposes; I used them to help the students make mnemonic associations. Many of the lessons contained role plays and vignettes involving student conflicts I had observed, in which different negotiation strategies were used, in an effort to make the instruction more experiential. Interested readers may find the lesson plans used during the instructional sessions in Appendix D, and their corresponding role plays and vignettes in Appendix E.

**Procedures**

**Introduction of Intervention to Students.** During the first lesson with each class group, I explained to the students that I would be teaching them how to resolve conflict with negotiation and problem solving. I told the students that I hoped they would all have fun learning to be problem-solvers and negotiators. I next gave the students an opportunity to ask any questions they had about working with me. Finally, I asked each group to establish ground rules for behavior, which I wrote down and displayed during each subsequent lesson. I explained my behavioral expectations and the reinforcement procedures.

**Behavior Management.** All students in the BD program had a behavior plan which included a point system and a level system that required each student to have a point sheet. During the instructional sessions, the students brought their classroom point sheets with them. Students continued to earn points during their sessions with me, and I followed any specified departmental behavior support instructions or discipline procedures for students during the instructional sessions. Points earned could be used to buy privileges and rewards. Discipline procedures included giving behavior warnings, and, if the warnings were not
heeded, the students might receive time-away from the lesson or lose points on their point sheets. Points were tied to classroom privileges and reinforcements. Any discipline procedures implemented were done by giving the students a choice to follow redirections.

Additionally, I implemented my own reinforcement procedures for all students during the instruction that included incorporating short reinforcement breaks of approximately 5 minutes throughout each lesson. I had originally planned to place all three treatment groups on a variable interval reinforcement schedule of 15 minutes (V.I.15) at the end of which students could choose an edible reward, a sticker, or a brief break. However, the first treatment group of students required a V.I.5 schedule most of the time in order to stay on task and follow directions. Also, the first group of students requested the opportunity to earn free-time at the end of the sessions (if time permitted) and positive tickets as added choices. Earning free-time at the end of a session was based upon points earned on the behavior rubric, as well as the classroom schedule for a given day. Positive tickets were secondary reinforcements used by the classroom teachers that could be exchanged for classroom privileges and tangible reinforcements. Some examples of free-time activities included going to the gym, going outside, drawing, playing a game, or playing with legos.

With the second and third treatment groups, a VI15 schedule was sufficient, and I continued to allow the students to choose the reinforcements of edibles, stickers, short breaks, positive tickets, and free time at the end of the sessions. I delivered reinforcements by setting a timer. After the elapsed time passed, the students were allowed to choose a given reinforcement.
**Student Conditions.** The following sections describe the baseline, intervention, and maintenance conditions for the intervention. I will begin by describing the baseline conditions.

**Baseline.** The study consisted of three conditions: baseline, treatment, and maintenance. The baseline condition consisted of the classroom teachers collecting data on the targeted student behaviors prior to the students receiving the problem solving negotiation instruction. The baseline data collection for the study began on Dec. 3rd. While both Lang’s and Smit’s class groups began baseline data collection on December 3rd, Ms. Smit forgot to collect data from December 9th through December 18th, so the data for those days was missing for Ms. Smit’s class group. At this point, I made the decision to visit with the teachers and the CI at least once a week, so that I could collect the data sheets myself and check for any possible problems. The timeline on page 50 illustrates when the instructional treatment conditions occurred for the two classroom groups during the study.

I decided to begin the intervention with Ms. Lang’s students on January 7th, soon after the winter break. I made the decision to begin the treatment with Ms. Lang’s students first, since both classrooms had baselines close to zero in the problem solving area. However, since Ms. Smit had several days of missing data, but Ms. Lang had collected all of her data, I made the decision to begin the treatment intervention with Ms. Lang’s class group first. Since the treatment was the twelve lessons on problem solving negotiation, the first day of treatment began with the first lesson.
Table 1

*Instructional Treatment Timeline*

<table>
<thead>
<tr>
<th>Condition</th>
<th>Group 1 (Lang)</th>
<th>Group 2 (Smit)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Begin Baseline Data Collection</strong></td>
<td>December 3</td>
<td>December 3</td>
</tr>
<tr>
<td><strong>Begin Negotiation Instruction</strong></td>
<td>January 7</td>
<td>February 7</td>
</tr>
<tr>
<td><strong>End Negotiation</strong></td>
<td>January 22</td>
<td>February 24</td>
</tr>
<tr>
<td><strong>Instruction</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Acquisition Check</strong></td>
<td>January 23</td>
<td>February 25</td>
</tr>
<tr>
<td><strong>Maintenance Probe 1</strong></td>
<td>February 24</td>
<td>March 26</td>
</tr>
<tr>
<td><strong>Maintenance Probe 2</strong></td>
<td>March 24</td>
<td>April 14</td>
</tr>
<tr>
<td><strong>Maintenance Probe 3</strong></td>
<td>April 8</td>
<td></td>
</tr>
<tr>
<td><strong>End of Data Collection</strong></td>
<td>April 18</td>
<td>April 18</td>
</tr>
</tbody>
</table>

*Treatment.* The treatment condition consisted of instructing students in a series of 12 lessons, of approximately one hour in length, in problem-solving negotiation adapted from Schrumpf et al.’s (1997) conflict resolution curriculum, as well as including some ideas and terminology from Bodine et al.’s (1994) curriculum, and Johnson and Johnson’s (1995) curriculum. During each lesson, I placed a copy of the problem solving steps in a visible
location for students to refer to as needed, unless the students were practicing memorizing the steps. Since a multiple baseline design across individuals and settings was used, the students were divided into two separate treatment groups based upon their classroom placement: Ms. Lang’s students (Cain, Rose, and Judd) and Ms. Smit’s students (Alan, Tim, and Norm).

While I attempted to maintain procedural integrity for each treatment group, there were a number of unplanned challenges. Among the challenges to procedural integrity was the limited classroom and office space available for instructional use. While the CI had reserved rooms for the instruction, sometimes the reserved rooms were being used. To address the problem of finding a room, I found I needed to arrive 30 minutes early to make sure a room was available or at least a partitioned area of the media center. However, there were occasions when I had to provide instruction in the middle of the media center while other classes were there, so the students receiving instruction would become distracted and begin displaying additional behavior problems.

Though I do not believe there was a negative effect on the procedural integrity of the treatment, there were times when I had to give instruction for more than one lesson on the same day, due to student absences, students being unavailable due to behavior problems, and due to scheduling and time constraints. However, I attempted to provide the students with only one lesson lasting approximately 60 minutes per day when possible. The 60 minutes included breaks taken by the students. Every effort was made to maintain maximum fidelity of treatment by ensuring the same goals and material were covered during each lesson.

An observer (a colleague) conducted three treatment fidelity checks during the study. Treatment fidelity was measured by determining the percentage of planned instructional
behaviors actually displayed during each lesson. The observer completed a checklist of instructional behaviors and content during each treatment fidelity check (Appendix F). One treatment fidelity check was conducted during instruction for each group of students. Though there was 100% fidelity of treatment during the observations, the students often appeared to be distracted by the presence of the observer.

After each student treatment group completed the final lesson, I gave each of the three participating teachers a copy of the six problem solving steps written on brightly colored paper and laminated. Each teacher was instructed to post the steps in her classroom and to refer to them as needed.

Additionally, I gave each student treatment group an acquisition check within a day of completing the final lesson. The purpose of the acquisition check was to assess how well the students had learned problem solving negotiation and to see if the students needed any re-teaching.

**Maintenance.** The maintenance condition addressed the students’ retention and use of the problem solving negotiation skills after the acquisition check had been done and the students had some time to use problem solving negotiation in the classroom. I assessed both the need for re-teaching opportunities and provided them as needed for the students during the maintenance condition. Since Ms. Lang’s students were members of the first treatment group, they had the opportunity to receive a total of three re-teaching sessions during the maintenance condition. Since Ms. Smit’s students were members of the second treatment group, they had the opportunity to receive a total of two re-teaching sessions during the maintenance condition. Finally, Ms. Tice’s students, the last treatment group, had the opportunity to receive one re-teaching session during maintenance. Re-teaching consisted of
visually showing the students the six problem solving steps and orally reviewing them with the students if needed. I gave each student a maximum time limit of 15 minutes to participate in the re-teaching.

**Data collection measures.** I constructed and used four types of measures for data collection during the implementation of the study: student behavior measures, treatment acquisition measures, maintenance measures, and attitude measures. I will first discuss student behavior measures.

**Student behavior measures.** The targeted student behaviors that I measured were:

1. Verbal Aggression,
2. Physical Aggression,
3. Problem Solving Without Teacher Prompt,
4. Problem Solving With Teacher Prompt,
5. Problem Solving With CI Prompt,
6. Forcing,
7. Avoidance,
8. Office Referrals for Disruptive Behavior.

The classroom teachers and I had agreed to conduct a simple event recording procedure using a daily observational record sheet for each student to record any of the targeted behaviors occurring during a given date. The teachers recorded each occurrence of the targeted behaviors for individual students with a tally on the observational record sheet on the date that the behaviors occurred. In the event a teacher was absent, she tallied the targeted behaviors based on anecdotal records from the assistant and the substitute.
I collected the observational record sheets and daily points earned each week. I totaled the daily number of tallies for each targeted behavior of each individual student, and recorded the daily points earned. I also totaled the daily number of targeted behaviors occurring for each treatment group in each class.

I conducted inter-observer reliability checks every two weeks. I would observe in the classrooms for approximately 30 minutes during the checks. Reliability was calculated for all of the categories of targeted behaviors by dividing the number of agreements by the total number of agreements plus disagreements and multiplying them by 100. Inter-observer reliability scores ranged from 50%-100% for Ms. Lang’s and Ms. Smit’s class groups. Reliability scores for problem solving and forcing negotiations were sometimes lower than 80%. It appeared that all of the teachers clearly understood forcing behavior. However, on occasion, forcing behaviors would occur in a classroom among students, and because the teacher was engaged in instruction it was difficult for her to observe and record the forcing behaviors.

I provided a brief review and discussion of the operational definitions lasting approximately 15-20 minutes whenever reliability dropped below 80%. Additionally, in January I began meeting briefly with the teachers once or twice per week during lunch or a break to clarify any questions regarding data collection or the study as well to build rapport with the teachers. Interested readers may find tables for Lang’s and Smit’s inter-observer reliability checks in Appendix G.

**Treatment acquisition measures.** In addition to student behavior measures, I also used treatment acquisition and maintenance measures (Appendix H). I administered these measures individually to students. I will now discuss the acquisition measure.
The purpose of the acquisition measure, or acquisition check, was to evaluate the extent to which the students had learned and could apply the content of the instruction delivered during the intervention. The acquisition check was administered to each treatment group either the same day problem-solving instruction was completed or the following day.

The acquisition check (and maintenance probes) was composed of three parts: 1) Recall, 2) Application Part I, and 3) Application Part II. The acquisition check was administered to each student individually. I administered the recall part first. Completion of the recall part involved me verbally directing the student to state the six steps of the problem-solving negotiation process. If the student correctly stated a given step, then I scored the student’s response as correct without prompt. If the student could not remember a given step, then I would first provide the student with a picture prompt to help the student recall the step. Each picture prompt corresponded with the picture cues used during the lessons and was glued on one of six index cards corresponding with the problem solving steps. If the student recalled the step with the picture prompt, then I scored the student’s response as correct with picture prompt. If the student still could not remember the step, I would next provide the student with a verbal prompt to help the student recall the step. Only one verbal prompt was given per step, and the same verbal prompts were used for every student. If the student was able to correctly remember a given step with the addition of a verbal prompt, then I scored the response as correct with picture and verbal prompt. I used the following verbal prompts for each of the six problem solving steps:

Step 1: Agree to…

Step 2: Share…

Step 3: Say what…
Step 4: Think of…

Step 5: Ask which…

Step 6: Agree on…

If a student remained unable to remember a step after being given a verbal prompt, I provided re-teaching of the steps by allowing the student to review a brightly colored sheet of paper with the six steps and picture cues printed on it, and by allowing the student to review six index cards with each of the six steps written on the individual cards. I allowed each student a maximum of fifteen minutes of re-teaching. If after the re-teaching, a student was unable to state the correct step without a picture or a verbal prompt, then the response would be scored as incorrect. I recorded student responses on individual student recall sheets (Appendix H).

During the Application Part I section of the acquisition check, I read each student the same short vignette containing a conflict. Next, I asked the student a series of eight questions, each of which addressed a problem-solving step, to prompt the student to think of a way that the conflict might be resolved by using problem-solving negotiation. I recorded all student responses beneath each question, and scored the responses as correct or incorrect.

I created the Application Part II section of the acquisition check for four purposes:

1. To assess the students’ ability to identify the type of negotiation strategy being used in a given conflict,

2. To assess the students’ ability to identify the basic needs involved in a given conflict,

3. To assess whether the students had retained basic information about the characteristics of active listening,
4. To assess whether the students remembered the definition of conflict.

The first part of Application Part II had a series of four short vignettes containing a conflict that had been resolved by one of the negotiation strategies of forcing, avoiding, or problem-solving. Following each vignette were two questions written in a multiple choice format. The first question asked the student to identify the negotiation strategy being used in the vignette. The second question asked the student to identify which of the basic needs the protagonists in the story were attempting to meet. The researcher orally read the vignettes and the questions to each of the students and recorded student responses.

The last part of Application Part II consisted of two questions that the researcher orally read to the student. The first question asked the student to state any characteristics of active listening they could remember, while the second question asked the student to give a correct definition of conflict. I recorded student responses to each of the questions.

**Maintenance measures.** A third measure I created and administered was the maintenance probe. I gave a total of three probes during the course of the study. Maintenance probes were designed and administered in the exact same way as the acquisition check. While all three treatment groups received an acquisition check and Maintenance Probe 1, due to the multiple baseline design only Treatment Group One received all three maintenance probes. Treatment Group Two received Maintenance Probe 1 and Maintenance Probe 2; Treatment Group Three received only Maintenance Probe 1. The purpose of the maintenance probes was to assess how well the students retained the problem-solving negotiation skills throughout the study and to provide re-teaching of the problem-solving steps as necessary.
I scored the acquisition check and maintenance probes based upon my knowledge of conflict resolution and the negotiation process. While scoring on the recall section was a very objective process since the students either stated the correct step or they did not state the correct step, scoring on the two application sections was more subjective. Thus, I developed some general guidelines for scoring and recruited a colleague (grader) to independently grade the two applied sections of the acquisition check and maintenance probes. The general guidelines for scoring the two application sections are included in Appendix I.

The grader had three years earlier received a conflict resolution training and negotiation workshop that I had given. The workshop included the same skills and concepts taught in the student problem solving negotiation training. Additionally, I provided the grader with the same operational definition and negotiation strategy training that I provided the teachers participating in the study, and I reviewed the general scoring guidelines with the grader. Because the grader had participated in my earlier workshop, she had received prior instruction in many of the concepts of negotiation and conflict resolution that I had taught the participating students. Scores on acquisition measures, maintenance probes, and inter-grader reliability will be provided in Chapter 4.

**Attitude measures.** The fourth and final type of measure that I developed and administered was a student and teacher attitude measure. I administered two student attitude measures. The purpose of both of the student attitude measures was to determine student perceptions of the problem solving negotiation instruction. Interested readers may find the questions included on the student and teacher attitude measures in Appendix H.
I gave the first attitude measure soon after the final lesson. The purpose of the first attitude measure was to determine if the students felt they would use the negotiation training in various settings and to determine student likes and dislikes regarding the instruction.

I gave the second attitude measure closer to the conclusion of the study. The purpose of the second attitude measure was to determine if the students felt they had actually used the problem solving negotiation training, and if they felt the instruction had improved their behavior.

Both student attitude measures consisted of a series of statements beneath which were drawn one “smiley” face, one neutral face, and one “frowny” face. I first instructed the students to circle the face that most closely agreed with the way they felt about the statement. Next, I read each statement to the students. Additionally, the first attitude assessment contained two open-ended questions at the end, and the second attitude assessment contained one open-ended question at the end. I read the questions orally to the students who stated their responses. I recorded the responses that the students gave, unless they asked me to allow them to write their own answers.

The teacher attitude assessment consisted of statements about the negotiation training on which I asked the teachers to circle Likert scale type responses: strongly agree, agree, disagree, strongly disagree, and unsure. Additionally, the attitude assessment had an open-ended question at the end encouraging the teachers to make any additional comments they might wish to share. The purpose of the teacher attitude assessment was to determine if the teachers had positive perceptions about the negotiation training.
I will next discuss the impact of the problem solving negotiation instructional training on the participating students. I will address the results of the data gathered in each of the various targeted areas in the study.
CHAPTER 4

RESULTS

In this section I will address the results of the data gathered in the study. The data include the dependent measures of the targeted student behaviors. Also included in the data I will address in this section are the results of acquisition and maintenance measures of students’ recall and application of the problem solving negotiation procedure. Finally, I address the results of student and teacher attitude data about the problem solving negotiation training.

Standards for Analysis of Results

Because I was interested in the direct application of the research from this study to the classroom, I initially chose a multiple baseline, single-subject design across individuals and classrooms. However, due to the sheer volume of data gathered on the targeted student behaviors, as well as variability of individual student data upon visual examination, I have included a detailed analysis of the behavioral data at the classroom level for Ms. Lang’s and Ms. Smit’s groups, rather than at the individual student level. Interested readers will find the individual student graphs for Ms. Lang’s and Ms. Smit’s students in Appendix I.

Results are presented in three sections. First, I discuss the analysis of classroom data on the dependent student behaviors of problem solving, avoiding, forcing, office, verbal aggression, and physical aggression. I used visual analysis of data via multiple baseline graphs as a component of addressing the effects of the intervention on the given student behaviors. I would like to note that while missing data are often visually represented in the literature by a break in the graphing line, in my graphs missing data is indicated by an
absence of data points due to my desire to present the graphs stacked closely together for an easier visual comparison.

The statistical indices used in this study to interpret the resulting impact of the problem solving negotiation instruction include the percentage of all non-overlapping data (PAND), means, and standard deviations. According to Riley-Tilman and Burns (2009), the American Psychological Association strongly recommends the use of effect size in the analysis of research results. Parker, Hagan-Burke, and Vannest (2007) describe a new statistical index referred to as percent of all non-overlapping data (PAND) as a strong measure to apply in the data analysis of single subject multiple baseline designs. PAND is particularly suited for multiple baseline designs that have a minimum of 20 data points because it permits the use of all of the data rather than being influenced by one data point that might be an outlier; furthermore, one can obtain a Phi score using PAND that can be converted to the commonly used and understood Cohen’s $d$ effect size (Parker et al., 2007; Riley-Tillman & Burns, 2009). Scruggs and Mastropieri (2001) state that the statistic known as percent of non-overlapping data (PND) is the most commonly used effect size in single subject design studies. However, due to the fact that PND does not take into account the combined effects of student data in both classrooms across both baseline and treatment, I chose to use PAND. Scruggs and Mastropieri (2001) also explain that the most serious problems with using effect size computations for single subject designs are due to both the small number of observations and the possible lack of independence of data. The difference between PAND versus PND (and arguably a strength of PAND) for multiple baseline designs is that PAND utilizes data from both the baseline and the intervention across settings or
participants. This pooled utilization of data makes the PAND statistic more likely to detect effects in single subject data (Parker et al., 2007; Riley-Tillman & Burns, 2009).

Cohen’s $d$ effect sizes are interpreted as follows: 0.2 to 0.4 are considered small effects; 0.5 to 0.7 are considered medium effects; and 0.8 and higher are considered large effects (Cohen, 1988; “Effect size and,”; Lauer, 2004). Cohen’s $d$ effect sizes can be positive or negative, with a negative effect size indicating that a treatment intervention did not have the desired effect. An educational treatment intervention that results in large effects implies that the intervention was highly successful; a treatment intervention with medium effects implies the intervention was moderately successful; and an educational treatment intervention with small effects indicates the treatment intervention had little impact on the outcomes measured.

The higher the PAND score, the less the data between the phases of a treatment intervention overlap, so one is tempted to assume the higher the PAND score, the greater indication there is of stronger outcomes. However Parker, et al. (2007) caution that because PAND gives a 100% score when there is no data overlap between phases, this can be misleading. Additionally, they explain that PAND measures reflect simple shifts in levels of the mean. Due to these weaknesses of PAND, Parker et al. (2007) also caution that any desirable trends be examined and considered during baseline before making a causative assumption about the treatment intervention’s impact. I would also like to note that the likelihood and strength of the impact of an intervention is ideally indicated when desired changes are seen immediately following baseline, during treatment (Riley-Tillman & Burns, 2009; Kazdin, 1982). Thus, I will address the visual examination of the data to interpret outcomes of the results in my subsequent discussion in Chapter 5. Furthermore, Cohen’s $d$
effect sizes derived from PAND will be briefly addressed in this chapter and discussed further in Chapter 5.

Additionally, I used the phase means and standard deviations of targeted student behavioral occurrences to examine outcomes in this study. For the targeted pro-social student behaviors, support for outcomes being positive was indicated if the mean number of occurrences increased with little variability of data shown by the standard deviations. For the targeted anti-social student behaviors, support for outcomes being positive was indicated if the mean number of occurrences decreased with little variability of data shown by the standard deviations. I computed means for behaviors displayed, as well as the standard deviations, for the different phases of the study. Phase means are visually represented within the graphs by horizontal lines.

After first addressing the analysis of the dependent measures of student behaviors at the classroom level, I next address students’ performance on the acquisition and maintenance measures to determine how well the students actually learned the problem solving negotiation strategy. Finally, I explain the students’ and teachers’ responses on the attitude measures.

Analysis of Classroom Data on Dependent Behavior Measurements

Tables 2 and 3 show the phase means and standard deviations for all targeted and observed student behaviors in Ms. Lang’s class and Ms. Smit’s class. Table 4 displays PAND, PHI, and the resulting Cohen’s $d$ indexes (computed using Phi scores) for these student behaviors across both Lang’s and Smit’s classrooms.
Table 2

*Phase Means and Standard Deviations for Lang’s Class Behaviors*

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Baseline</th>
<th>Treatment</th>
<th>Post 1</th>
<th>Post 2</th>
<th>Post 3</th>
<th>Post 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean PS</td>
<td>0.27</td>
<td>1.67</td>
<td>3.20</td>
<td>4.08</td>
<td>3.55</td>
<td>2.30</td>
</tr>
<tr>
<td>SD</td>
<td>(0.59)</td>
<td>(2.10)</td>
<td>(2.09)</td>
<td>(1.31)</td>
<td>(1.63)</td>
<td>(2.00)</td>
</tr>
<tr>
<td>Mean PSwTP</td>
<td>0.33</td>
<td>0.58</td>
<td>1.70</td>
<td>2.83</td>
<td>2.55</td>
<td>2.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.72)</td>
<td>(0.67)</td>
<td>(1.87)</td>
<td>(2.17)</td>
<td>(1.29)</td>
<td>(1.40)</td>
</tr>
<tr>
<td>Mean PSwCIP</td>
<td>0.07</td>
<td>0.00</td>
<td>0.35</td>
<td>0.17</td>
<td>0.36</td>
<td>0.40</td>
</tr>
<tr>
<td>SD</td>
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<td>(0.00)</td>
<td>(0.75)</td>
<td>(0.39)</td>
<td>(0.67)</td>
<td>(0.52)</td>
</tr>
<tr>
<td>Mean VA</td>
<td>8.53</td>
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<td>6.35</td>
<td>6.83</td>
<td>4.45</td>
<td>6.70</td>
</tr>
<tr>
<td>SD</td>
<td>(5.60)</td>
<td>(4.77)</td>
<td>(3.53)</td>
<td>(3.95)</td>
<td>(3.45)</td>
<td>(4.40)</td>
</tr>
<tr>
<td>Mean PA</td>
<td>4.13</td>
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<td>1.42</td>
<td>0.36</td>
<td>0.40</td>
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<tr>
<td>SD</td>
<td>(3.83)</td>
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<td>(1.63)</td>
<td>(1.51)</td>
<td>(0.50)</td>
<td>(0.70)</td>
</tr>
<tr>
<td>Mean Avoiding</td>
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<td>8.00</td>
<td>7.08</td>
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<td>6.11</td>
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<tr>
<td>SD</td>
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<td>(2.19)</td>
<td>(3.24)</td>
<td>(2.57)</td>
<td>(2.38)</td>
<td>(3.33)</td>
</tr>
<tr>
<td>Mean Forcing</td>
<td>7.53</td>
<td>10.67</td>
<td>8.75</td>
<td>11.92</td>
<td>10.09</td>
<td>8.90</td>
</tr>
<tr>
<td>SD</td>
<td>(4.82)</td>
<td>(3.05)</td>
<td>(3.65)</td>
<td>(5.43)</td>
<td>(4.18)</td>
<td>(3.87)</td>
</tr>
<tr>
<td>Mean Office</td>
<td>2.47</td>
<td>1.75</td>
<td>1.60</td>
<td>1.83</td>
<td>1.55</td>
<td>1.00</td>
</tr>
<tr>
<td>SD</td>
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<td>(1.71)</td>
<td>(1.67)</td>
<td>(1.95)</td>
<td>(1.86)</td>
<td>(1.05)</td>
</tr>
</tbody>
</table>

*Note. PS = Problem solving, PSwTP = Problem solving with teacher prompt, PSwCIP = Problem solving with crisis interventionist prompt, VA = Verbal aggression, PA = Physical aggression, and SD = Standard deviation.*
Table 3

Phase Means and Standard Deviations for Smit’s Class Behaviors

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Baseline</th>
<th>Treatment</th>
<th>Post 1</th>
<th>Post 2</th>
<th>Post 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean PS</td>
<td>0.07</td>
<td>0.00</td>
<td>0.23</td>
<td>1.21</td>
<td>1.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.26)</td>
<td>(0.00)</td>
<td>(0.44)</td>
<td>(0.89)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Mean PSwTP</td>
<td>0.45</td>
<td>0.36</td>
<td>0.69</td>
<td>1.79</td>
<td>1.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.74)</td>
<td>(0.67)</td>
<td>(1.18)</td>
<td>(1.37)</td>
<td>(0.84)</td>
</tr>
<tr>
<td>Mean PSwCIP</td>
<td>0.07</td>
<td>0.09</td>
<td>0.15</td>
<td>0.29</td>
<td>0.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.26)</td>
<td>(0.30)</td>
<td>(0.38)</td>
<td>(0.61)</td>
<td>(0.44)</td>
</tr>
<tr>
<td>Mean VA</td>
<td>0.10</td>
<td>0.09</td>
<td>0.00</td>
<td>0.14</td>
<td>0.40</td>
</tr>
<tr>
<td>SD</td>
<td>(0.31)</td>
<td>(0.30)</td>
<td>(0.00)</td>
<td>(0.36)</td>
<td>(0.90)</td>
</tr>
<tr>
<td>Mean PA</td>
<td>0.03</td>
<td>0.09</td>
<td>0.00</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.19)</td>
<td>(0.30)</td>
<td>(0.00)</td>
<td>(0.00)</td>
<td>(0.44)</td>
</tr>
<tr>
<td>Mean Avoiding</td>
<td>8.41</td>
<td>5.64</td>
<td>3.15</td>
<td>3.57</td>
<td>2.80</td>
</tr>
<tr>
<td>SD</td>
<td>(5.10)</td>
<td>(4.20)</td>
<td>(3.24)</td>
<td>(1.55)</td>
<td>(2.17)</td>
</tr>
<tr>
<td>Mean Forcing</td>
<td>7.41</td>
<td>6.64</td>
<td>2.46</td>
<td>3.57</td>
<td>2.80</td>
</tr>
<tr>
<td>SD</td>
<td>(5.18)</td>
<td>(4.30)</td>
<td>(3.18)</td>
<td>(1.91)</td>
<td>(2.17)</td>
</tr>
<tr>
<td>Office</td>
<td>0.14</td>
<td>0.00</td>
<td>0.69</td>
<td>0.00</td>
<td>0.20</td>
</tr>
<tr>
<td>SD</td>
<td>(0.44)</td>
<td>(0.00)</td>
<td>(1.18)</td>
<td>(0.00)</td>
<td>(0.45)</td>
</tr>
</tbody>
</table>

Note. PS = Problem solving, PSwTP = Problem solving with teacher prompt, PSwCIP = Problem solving with crisis interventionist prompt, VA = Verbal aggression, PA = Physical aggression, and SD = Standard deviation.
Problem Solving

I broke down the reported teacher observations of occurrences of student problem solving negotiation behavior into three categories: problem solving (independent), problem solving with teacher prompt, and problem solving with crisis interventionist (CI) prompt. First, I will discuss student problem solving negotiations not requiring any sort of prompting (independent problem solving).

A graph of the visual representation of the problem solving negotiation behaviors may be viewed in Figure 1. Upon visual examination of Figure 1, it would appear that the negotiation instruction increased the number of problem solving negotiations during the treatment phase for Ms. Lang’s class but had no effect during the treatment phase on Ms. Smit’s class. Both classes displayed some occurrences of problem solving negotiations during baseline. It would also appear that for Ms. Lang’s class, occurrences of problem solving negotiations remained higher during each of the post treatment phases of the study than they were during the baseline phase. For Ms. Smit’s class, problem solving negotiations appear to be higher for each of the post treatment phases than they were during either the baseline or the treatment intervention phases.
Figure 1. Problem Solving Occurrences

Mean number of problem solving negotiations for Ms. Lang’s class during baseline was less than 1. During the instructional treatment, the mean was 1.67 and remained consistently higher than during baseline throughout the study as indicated by the means in each of the post treatment phases. The mean number of problem solving negotiations for Ms. Smit’s class during baseline was also less than 1. During the instructional treatment, no problem solving negotiations occurred in Smit’s class, while post treatment problem solving negotiation means ranged from 0.23 - 1.21. For problem solving negotiations, a Cohen’s $d$ medium effect size of .70 was obtained, and there was 68% non-overlap of data between baseline and treatment phases as shown by the PAND data in Table 4.
Table 4

Effect Sizes using Percent of all Non-overlapping Data (PAND) for Student Behaviors across Classrooms

<table>
<thead>
<tr>
<th>Behavior</th>
<th>PAND</th>
<th>PHI</th>
<th>Cohen’s d</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS</td>
<td>68%</td>
<td>.33</td>
<td>.70</td>
</tr>
<tr>
<td>PSwTP</td>
<td>75%</td>
<td>.47</td>
<td>.53</td>
</tr>
<tr>
<td>PSwCIP</td>
<td>48%</td>
<td>.09</td>
<td>-.18</td>
</tr>
<tr>
<td>VA</td>
<td>61%</td>
<td>.19</td>
<td>.38</td>
</tr>
<tr>
<td>PA</td>
<td>60%</td>
<td>.17</td>
<td>.35</td>
</tr>
<tr>
<td>Avoiding</td>
<td>67%</td>
<td>.32</td>
<td>.68</td>
</tr>
<tr>
<td>Forcing</td>
<td>60%</td>
<td>.17</td>
<td>.35</td>
</tr>
<tr>
<td>Office</td>
<td>60%</td>
<td>.17</td>
<td>.35</td>
</tr>
</tbody>
</table>

Note. PS = Problem solving, PSwTP = Problem solving with teacher prompt, PSwCIP = Problem solving with crisis interventionist prompt, VA = Verbal aggression, and PA = Physical aggression.

Figure 2 displays the visual representation of problem solving negotiations that occurred once a teacher prompt had been given. Visual examination of the graph for Lang’s class indicates a slight increase of problem solving negotiations with teacher prompting during the treatment intervention phase. Lang’s post treatment phase occurrences of problem solving with teacher prompting increased to levels higher than those present at either baseline or treatment. The graph for Smit’s class shows a very slight decrease during treatment compared to baseline, but problem solving negotiations with teacher prompting remained basically the same between treatment phase and the baseline phase. Occurrences of problem
solving negotiations requiring teacher prompts in Smit’s class were higher during each of the post treatment phases than in either baseline or treatment, similar to the post treatment increases noticed in Ms. Lang’s class graph.

Figure 2. Problem Solving with Teacher Prompt Occurrences.

Looking at Lang’s class means for problem solving with a teacher prompt in Table 2, one is able to see a slight immediate increase between the baseline and the treatment phase. However, means for both baseline and treatment phases are less than 1 occurrence. Means during Lang’s post treatment phases range from 2.30 to 4.08. For Smit, Table 3 shows that there is a mean of less than one occurrence of problem solving with teacher prompting until the second and third post treatment phases, in which the means increase to 1.79 occurrences.
in the second post treatment phase and then to slightly above one occurrence in the final post treatment phase. Using PAND, there was a medium Cohen’s \(d\) effect size of .53 for problem solving with teacher prompt, and 75% non-overlapping data between the baseline and treatment phases (Table 4).

For problem solving negotiations requiring the prompt of the CI, one can see from a visual examination of Figure 3 that there was little difference between observed occurrences in the treatment intervention phases of the two classrooms as compared to the baseline phases. Slight increases of problem solving occurrences with the prompt of the CI did occur in each of the post treatment phases for the two classrooms. Looking at Tables 2 and 3, one can see that all phase means for problem solving with CI prompting in both Lang’s and Smit’s classrooms were below 1 and thus there were very few occurrences of the behavior overall. Table 4 shows a small Cohen’s \(d\) effect size of -.18 which is not in the direction one would hope, but it is a very small effect; only 48% of the problem solving with CI prompt data do not overlap between the baseline and treatment.

**Avoiding and Forcing**

I will next discuss the observational data for the two undesirable conflict resolution behaviors of avoiding and forcing. I will begin by addressing the analysis of avoiding behaviors. Figure 4 displays the visual analysis of the teacher observed occurrences of avoiding across Lang’s and Smit’s classrooms. An immediate decrease in avoiding behaviors can be seen from the baseline to the treatment phases in both Lang’s and Smit’s classes. Lang’s classroom showed a continued decrease in student avoiding behaviors throughout the post treatment phases. Smit’s classroom displayed a continued decrease in
avoiding during the first post phase with a slight increase in the second post phase and another slight decrease in the third post phase.

Figure 3. Problem Solving with Crisis Interventionist Prompt Occurrences.

Looking at Lang’s class means for avoiding in Table 2, one sees that at baseline there were a total of slightly over 15 occurrences going down to slightly over 10 occurrences at treatment with a continued downward trend of the mean number of avoiding behaviors through the fourth post treatment phase. Smit’s class mean for avoiding decreased from slightly more than 6 occurrences during baseline to more than 5 during treatment and ranged from 2.80 to 3.57 during the post treatment phases. PAND data for avoiding in Table 4 indicate a medium Cohen’s $d$ effect size of .68 across both classrooms with 67% non-overlap of data between baseline and treatment.
Figure 4. Avoiding Occurrences.

The visual data on forcing presented in Figure 5 show quite variable results. Lang’s graph indicates an increase in undesirable forcing behaviors during the treatment phase when compared to the baseline phase. Each consecutive post treatment phase illustrates the forcing behaviors going up and down but continuing to remain slightly higher than at baseline. Smit’s graph shows a slight increase in forcing behaviors during the treatment intervention phase with a larger decrease during the first post treatment phase. Forcing behaviors go slightly up and then slightly down again through the post treatment 2 and 3 phases, with occurrences of forcing behaviors remaining consistently below their baseline occurrences.
Lang’s class baseline mean for forcing is 7.53 (Table 2), and the treatment intervention mean increases to 10.67 forcing occurrences. Post treatment forcing occurrences range from a low of 8.75 to a high of 11.92. Smit’s class baseline mean for forcing is 7.41 with the treatment intervention mean decreasing slightly to 6.64 (Table 3). Occurrences of forcing behaviors in Smit’s class range from 2.46 to 3.57 during post phases, consistently lower than observed baseline forcing occurrences. Using PAND calculations (Table 4), a small Cohen’s $d$ effect size of .35 was calculated; there was 60% non-overlapping data between baseline and treatment.
Office Referrals

I will now discuss the impact of the problem solving negotiation instruction on the number of office referrals. A visual representation of office referral occurrences is displayed in Figure 6.

Figure 6. Office Referral Occurrences.

For Lang’s class, one can see a decrease in office referrals during the treatment intervention with number of office occurrences remaining below baseline throughout the post treatment phases. Visual inspection of data for Smit’s class shows the occurrences of baseline and treatment phase office referrals remained essentially unchanged with a very slight decrease during treatment (no occurrences of office referrals), and office referral occurrences...
increasing to slightly above those of baseline during the first and third post treatment phases.
During the second post treatment phase there were again no occurrences of office referrals.

Table 2 shows Lang’s class baseline mean for office referrals to be slightly over 2, at 2.47 occurrences, and the treatment mean to decrease to slightly below 2, at 1.75 occurrences. Lang’s office referral post treatment means range from 1.83 to 1.00. Table 3 shows Smit’s baseline office referrals to be at a mean of less than 1 occurrence, near zero, with the treatment mean decreasing slightly to no office referrals at all and post treatment means ranging from just under 1 occurrence (0.69) to no occurrences of office referrals. Using PAND, a small Cohen’s $d$ effect size of .35 was calculated for occurrences of office referrals (Table 4), and there was 60% non-overlap between baseline and treatment phase data.

**Verbal and Physical Aggression**

Now I will address the effects of the problem solving negotiation instruction on observed occurrences of verbal and physical aggression. Looking at Figure 7, one can see that Lang’s class has a slight decrease in verbal aggression during treatment as compared to baseline. Verbal aggression occurrences continue to remain slightly below baseline levels throughout the post treatment phases for Lang’s class. Smit’s class had few occurrences of verbal aggression during any of the phases, so negligible change can be observed visually.

Table 2 indicates a mean of 8.53 incidents of verbal aggression occurring during Lang’s class baseline, decreasing to 7.33 incidents during treatment and ranging from 6.83 to 4.45 during the post treatment phases. Mean occurrences of verbal aggression in Smit’s class are near or at zero in all phases (Table 3). PAND data in Table 4 show a small Cohen’s $d$
effect size of .38 for occurrences of verbal aggression, and 61% non-overlap of data between the baseline and treatment phases.

Figure 7. Verbal Aggression Occurrences.

Figure 8 illustrates the observed occurrences of physical aggression across Lang’s and Smit’s classes. A steep decrease in physical aggression appears during the treatment phase when compared to the baseline, and the occurrences of physical aggression remain below baseline levels throughout the post treatment phases for Lang’s class. Figure 8 shows the incidents of physical aggression for all phases of the study in Smit’s class to remain at or near zero.
Table 2 shows a mean decline in the occurrences of physical aggression in Lang’s class from 4.13 during baseline to 1.67 during treatment, with occurrences remaining slightly above a mean of 1 to slightly below a mean of 1 throughout the post treatment phases. By viewing Table 3, one can see that the means for physical aggression in Smit’s class are all near zero. PAND data in Table 4 show a small Cohen’s $d$ effect size of .35, with 60% non-overlap of data between baseline and treatment.
Acquisition and Maintenance Measures (Recall)

As described in Chapter 3, I administered acquisition and maintenance probes to students in order to assess how well they had learned the problem solving negotiation procedure. Tables 5, 6, and 7 illustrate the scores on the recall part of the acquisition check for Lang’s students. All three of Lang’s students were able to recall and orally state each of the six steps without re-teaching during the acquisition phase. Furthermore, all three of the students were able to correctly state the first and last steps of the problem solving negotiation procedure without any prompts. However, Cain required picture prompts for both steps three and five. Judd required picture prompts for steps two, three, and four, as well as both a picture and a verbal prompt for step 5. Rose required a picture prompt for steps three and four and both a picture and a verbal prompt for step 5.
Table 5

*Acquisition Check for Cain (Recall)*

<table>
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<tr>
<th></th>
<th>Correct (No Prompt)</th>
<th>Correct (Picture Prompt)</th>
<th>Correct (Picture and Verbal Prompt)</th>
<th>Correct (Re-teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cain</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
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<tr>
<td>Stated Step 6</td>
<td>Yes</td>
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Table 6

*Acquisition Check for Judd (Recall)*

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<tr>
<th></th>
<th>Correct (No Prompt)</th>
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<tr>
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<td></td>
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</tr>
<tr>
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<td>Stated Step 6</td>
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Table 7

Acquisition Check for Rose (Recall)

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<th>Correct (Picture Prompt)</th>
<th>Correct (Picture and Verbal Prompt)</th>
<th>Correct (Re-teaching)</th>
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<tr>
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<tr>
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Tables 8, 9, and 10 illustrate the scores on the recall part of the acquisition check for Smit’s students. Congruent with Lang’s students, all of Smit’s students were able to correctly verbally state the first and the last steps of the problem solving negotiation procedure without any prompting. Alan was able to correctly state all problem solving negotiation steps without any prompting, and Tim did not require any prompting for six of the seven steps. He needed a picture prompt for step four. Norm needed picture prompts for steps three, four, and five. None of Smit’s students needed re-teaching of step recall during acquisition.
### Table 8

**Acquisition Check for Alan (Recall)**

<table>
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<th>Step</th>
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<th>Correct (Re-teaching)</th>
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### Table 9

**Acquisition Check for Norm (Recall)**

<table>
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<th>Correct (Re-teaching)</th>
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### Table 10

**Acquisition Check for Tim (Recall)**

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<th>Correct (Re-teaching)</th>
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Tables 11, 12, and 13 show the scores on the recall part of the first maintenance probe for Lang’s students. Cain, Rose, and Judd all continued to be able to state the first and last problem solving steps without prompts. However, all of the students in Lang’s class required picture prompts for some of the middle steps.
Table 11

*Maintenance Probe One for Cain (Recall)*

<table>
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<th>Picture and Verbal Prompt</th>
<th>Re-teaching</th>
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Table 12

*Maintenance Probe One for Judd (Recall)*

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<th>Picture and Verbal Prompt</th>
<th>Re-teaching</th>
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<tr>
<td>Stated Step 2</td>
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<td>Stated Step 3</td>
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Table 13

*Maintenance Probe One for Rose (Recall)*

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<td>Stated Step 5</td>
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<td>Stated Step 6</td>
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</table>

Tables 14, 15, and 16 illustrate the scores on the recall part of the first maintenance probe for Smit's students. Once again, Alan was able to recall all six of the problem solving steps without any prompts, and Tim recalled four out of six of the steps without any prompts and only needed picture prompts for steps three and four. Norm however, required picture prompts for steps four and five and needed both a picture and a verbal prompt for step three. Once again, none of the students required any re-teaching at this point.
### Table 14

**Maintenance Probe One for Alan (Recall)**

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<td><strong>Alan</strong></td>
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### Table 15

**Maintenance Probe One for Norm (Recall)**

<table>
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<td><strong>Norm</strong></td>
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<tr>
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<td>Stated Step 4</td>
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Table 16

*Maintenance Probe One for Tim (Recall)*

<table>
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<th>Correct (Picture and Verbal Prompt)</th>
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<td>Stated Step 6</td>
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</table>

Tables 17, 18, and 19 illustrate the scores on the recall section of the second maintenance probe for Lang’s students. All three students continued to recall the first and the last steps without any prompting. However, Cain required re-teaching of steps four and five. Once Cain studied the steps again with me, he was able to recall all six of the steps without any prompts. Neither Judd nor Rose needed to be re-taught any of the steps, though Judd did need picture prompts on steps three and four, and he required both a picture and a verbal prompt on step 5. Rose needed a picture prompt for step 5 and required both a picture and a verbal prompt for steps three and four.
Table 17

*Maintenance Probe Two for Cain (Recall)*

<table>
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Table 18

*Maintenance Probe Two for Judd (Recall)*

<table>
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Table 19

*Maintenance Probe Two for Rose (Recall)*

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Tables 20, 21, and 22 display the scores on the recall section of the second maintenance probe for Smit’s students. Alan continued to recall all six of the steps without any prompts, and Tim also did not need any prompting for recall of the steps during this probe. However, Norm did require re-teaching of steps three and four and needed picture prompts for these same steps to be able to recall them after re-teaching.
Table 20

*Maintenance Probe Two for Alan (Recall)*

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Table 21

*Maintenance Probe Two for Norm (Recall)*

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Table 22

*Maintenance Probe Two for Tim (Recall)*

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</tbody>
</table>

Finally, Tables 23, 24, and 25 display Lang’s student scores on the recall section of the third maintenance probe. The only student who required re-teaching of the steps during the third probe was Judd. He could not recall step four or five, and after the re-teaching Judd needed picture prompts to recall these two steps. Neither Cain nor Rose needed any re-teaching during this probe. Cain required picture prompts to recall three of the middle steps, and Rose required a picture prompt to recall step five, as well as both a picture and a verbal prompt to recall steps three and four. It is interesting to note that during the acquisition checks and the maintenance probes, all of the students in both Lang’s and Smit’s classes were able to recall the first and the last steps consistently without any prompts.
Table 23

*Maintenance Probe Three for Cain (Recall)*

<table>
<thead>
<tr>
<th></th>
<th>Correct (No Prompt)</th>
<th>Correct (Picture Prompt)</th>
<th>Correct (Picture and Verbal Prompt)</th>
<th>Correct (Re-teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cain</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 1</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 2</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 3</td>
<td></td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Stated Step 4</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 5</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Stated Step 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 24

*Maintenance Probe Three for Judd (Recall)*

<table>
<thead>
<tr>
<th></th>
<th>Correct (No Prompt)</th>
<th>Correct (Picture Prompt)</th>
<th>Correct (Picture and Verbal Prompt)</th>
<th>Correct (Re-teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Judd</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 1</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 2</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 3</td>
<td>No</td>
<td></td>
<td>No</td>
<td>Yes (Picture)</td>
</tr>
<tr>
<td>Stated Step 4</td>
<td>No</td>
<td></td>
<td>No</td>
<td>Yes (Picture)</td>
</tr>
<tr>
<td>Stated Step 5</td>
<td>No</td>
<td></td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Stated Step 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 25

*Maintenance Probe Three for Rose (Recall)*

<table>
<thead>
<tr>
<th></th>
<th>Correct (No Prompt)</th>
<th>Correct (Picture Prompt)</th>
<th>Correct (Picture and Verbal Prompt)</th>
<th>Correct (Re-teaching)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rose</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 1</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 2</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 3</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Stated Step 4</td>
<td>No</td>
<td>No</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Stated Step 5</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stated Step 6</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Acquisition and Maintenance Measures (Application)**

As addressed in Chapter 3, I completed a series of acquisition checks and maintenance probes with the students to determine if they understood how to apply the basic concepts learned in the problem solving negotiation training. Examples of the application measures may be found in Appendix H. Application measures were divided into two separate parts, again as I described in Chapter 3. I will now describe the results of the first part of the application measures, each of which consisted of eight questions about a given conflict vignette. In order to evaluate the reliability of the scoring on these measures, student responses to the questions about the vignettes were rescored by a second, trained grader other than me.
Table 26 illustrates the results of the researcher scored correct student responses for Lang’s class on the first part of the acquisition check of application measure, as well as the results of the scored correct responses and inter-grader reliability. All students in Lang’s class were able to respond to each of the eight questions accurately on the Application Part 1 section of the acquisition check, and there was a 100% inter-grader reliability. Students in Lang’s class were able to think of between two to three ideas to resolve the conflict presented on the acquisition vignette. I noted that Judd complained about completing this part of the acquisition check, which he referred to as “taking the test.” Nonetheless, Judd was able to brainstorm three ideas for resolving the conflict presented on the check.

Table 26

_Lang’s Acquisition Scores and Inter-Grader Reliability (Application Part 1)_

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>3 ideas generated</td>
<td>Good clarification of freedom need</td>
</tr>
<tr>
<td>Judd</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>3 ideas generated</td>
<td>Complained about taking the “test”</td>
</tr>
<tr>
<td>Rose</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td></td>
</tr>
</tbody>
</table>
Table 27 illustrates the results of the scored correct student responses for Smit’s class on the first part of the acquisition application measure, as well as the results of the scored correct responses and inter-grader reliability. As in Lang’s class, all students in Smit’s class responded to the applied questions accurately, and there continued to be 100% inter-grader reliability. Alan and Tim generated more ideas than Norm or any of the students in Lang’s class, perhaps due to their higher academic functioning.

Table 27

*Smit’s Acquisition Measure Scores and Inter-Grader Reliability (Application Part 1)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>4 ideas generated</td>
<td>Good clarification of freedom need</td>
</tr>
<tr>
<td>Norm</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>4 ideas generated</td>
<td></td>
</tr>
</tbody>
</table>

Table 28 illustrates the results of the scored correct student responses for Lang’s class on Part 1 of the first maintenance application measure, as well as the results of the scored correct responses and inter-grader reliability. While I scored all the student responses in Lang’s class as being accurate, the grader scored the question about which needs were being met as incorrect for both Cain and Rose due to the fact that she thought they should have
included the power need in their response. Percent reliability between the grader and I ranged from 88% to 100%. All three students generated two ideas.

Table 28

*Lang’s Maintenance Probe 1 Scores and Inter-Grader Reliability (Application Part 1)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>8/8</td>
<td>7/8</td>
<td>88%</td>
<td>2 ideas generated</td>
<td>Power need is involved as well as freedom need.</td>
</tr>
<tr>
<td>Judd</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td>Good Responses</td>
</tr>
<tr>
<td>Judd</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td>Judd was resistant to completing probe and initially refused.</td>
</tr>
<tr>
<td>Rose</td>
<td>8/8</td>
<td>7/8</td>
<td>88%</td>
<td>2 ideas generated</td>
<td>Power need is involved as well as freedom need.</td>
</tr>
</tbody>
</table>

Table 29 illustrates the results of the scored correct student responses for Smit’s class on Part 1 of the first maintenance application measure, as well as the results of the scored correct responses and inter-grader reliability. All of the students in Smit’s class responded accurately to the applied questions, and there was 100% agreement between researcher
scored responses and grader scored responses. Alan generated the largest number of problem
solving ideas (four), while Tim generated three ideas, and Norm only generated two.

Table 29

*Smit’s Maintenance Probe 1 Scores and Inter-Grader Reliability (Application Part 1)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>4 ideas generated</td>
<td></td>
</tr>
<tr>
<td>Norm</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>8/8</td>
<td>8/8</td>
<td>88%</td>
<td>3 ideas generated</td>
<td></td>
</tr>
</tbody>
</table>

I will now address the second maintenance probe for Lang’s students on the first
application part of the measure. Table 30 illustrates the results of the scored correct student
responses for Lang’s class on Part 1 of the second maintenance application measure, as well
as the results of the scored correct responses and inter-grader reliability. While two of the
students, Cain and Rose accurately responded to all of the applied questions, Judd displayed
difficulty accurately identifying the needs of the characters in the vignette. Furthermore, the
grader commented that one of the ideas Judd suggested as a solution was forcing not problem
solving. All three students generated two ideas. Agreement between myself and the grader
on accuracy of student responses ranged from 88% to 100%. 
Table 30

*Lang’s Maintenance Probe 2 Scores and Inter-Grader Reliability (Application Part 1)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td></td>
</tr>
<tr>
<td>Judd</td>
<td>6/8</td>
<td>5/8</td>
<td>88%</td>
<td>2 ideas generated</td>
<td>One idea was forcing not problem solving. Power need was not identified.</td>
</tr>
<tr>
<td>Rose</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
<td></td>
</tr>
</tbody>
</table>

Table 31 illustrates the results of the scored correct student responses for Smit’s class on Part 1 of the second maintenance application measure, as well as the results of the scored correct responses and inter-grader reliability. While I scored all of Lang’s students’ eight responses as accurate, the grader scored seven out of the eight responses for Norm and Tim as accurate, resulting in an inter-grader reliability of 88%. The grader commented that one of the ideas generated by Norm involved avoiding, not problem solving, and one of the ideas generated by Tim involved forcing, not problem solving. Both Alan and Tim were able to generate three ideas, while Norm was only able to generate two.
Table 31

*Smit’s Maintenance Probe 2 Scores and Inter-Grader Reliability (Application Part 1)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>3 ideas generated</td>
<td></td>
</tr>
<tr>
<td>Norm</td>
<td>8/8</td>
<td>7/8</td>
<td>88%</td>
<td>2 ideas generated</td>
<td>One idea was not problem solving.</td>
</tr>
<tr>
<td>Tim</td>
<td>8/8</td>
<td>7/8</td>
<td>88%</td>
<td>3 ideas generated</td>
<td>One idea was not problem solving</td>
</tr>
</tbody>
</table>

Table 32 illustrates the results of the scored correct student responses for Lang’s class on Part 1 of the third, and final, maintenance application measure, as well as the results of the scored correct responses and inter-grader reliability. One of the students (Cain) in Ms. Lang’s class was in the process of moving out of town by the time the final maintenance probe was given, and so I was unable to administer all three parts of the probe to him. Cain and Rose accurately responded to all eight of the items on Part 1 of the final maintenance probe, and both students generated two ideas. Inter-grader reliability was 100% for the two students.
Table 32

Lang’s Maintenance Probe 3 Scores and Inter-Grader Reliability (Application Part 1)

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>*moved</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td>2 ideas generated</td>
</tr>
<tr>
<td>Judd</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>8/8</td>
<td>8/8</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I will now describe the results of the second part of the application measures, each of which consisted of a total of 10 questions, the first eight of which were questions over a series of four vignettes, and the last two of which were questions about active listening and the definition of conflict. Table 33 illustrates the results of the scored correct student responses for Lang’s class on Part 2 of the applied acquisition check, as well as the results of the scored correct responses and inter-grader reliability. All three of the students in Lang’s class responded accurately to the 10 questions. Inter-grader reliability was 100% for the three students.
Table 33

*Lang’s Acquisition Check Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judd</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 34 illustrates the results of the scored correct student responses for Smit’s class on Part 2 of the applied acquisition check, as well as the results of the scored correct responses and inter-grader reliability. While both the grader and I agreed that all of Alan and Norm’s responses were accurate, the grader scored the question about identifying basic needs in the third vignette incorrect for Tim because she thought the vignette addressed both power and freedom not just power, as Tim had responded. Thus, inter-grader reliability was 90% for the second part of Smit’s applied acquisition check.
Table 34

*Smit’s Acquisition Check Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norm</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>10/10</td>
<td>9/10</td>
<td>90%</td>
<td>There was no mention of freedom need in third vignette.</td>
<td></td>
</tr>
</tbody>
</table>

Table 35 illustrates the results of the scored correct student responses for Lang’s class on Part 2 of the first applied maintenance probe, as well as the results of the scored correct responses and inter-grader reliability. All three of the students in Lang’s class responded accurately to the 10 questions. Inter-grader reliability was 100% for the three students.
Table 35

*Lang’s Maintenance Probe 1 Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judd</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 36 shows the results of the scored correct student responses for Smit’s class on Part 2 of the first applied maintenance probe, as well as the results of the scored correct responses and inter-grader reliability. All three of the students in Smit’s class responded accurately to the 10 questions. Inter-grader reliability was 100% for the three students.

Table 37 shows the results of the scored correct student responses for Lang’s class on Part 2 of the second applied maintenance probe, as well as the results of the scored correct responses and inter-grader reliability. All three of the students in Lang’s class responded accurately to the 10 questions. Inter-grader reliability was 100% for the three students.
Table 36

*Smit’s Maintenance Probe 1 Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norm</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 37

*Lang’s Maintenance Probe 2 Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judd</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 38 shows the results of the scored correct student responses for Smit’s class on Part 2 of the second applied maintenance probe, as well as the results of the scored correct
responses and inter-grader reliability. While both the grader and I agreed that all of Norm’s and Tim’s responses were accurate, the grader scored Alan’s response to the question about identifying basic needs in the third vignette incorrect because she thought the vignette did not concern the belonging need as Alan had answered. Thus, inter-grader reliability was 90% for the second part of Smit’s applied Maintenance Probe 2.

Table 38

*Smit’s Maintenance Probe 2 Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alan</td>
<td>10/10</td>
<td>9/10</td>
<td>100%</td>
<td>Belonging need is not involved in third vignette.</td>
<td></td>
</tr>
<tr>
<td>Norm</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tim</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 39 shows the results of the scored correct student responses for Lang’s class on Part 2 of the third and final applied maintenance probe, as well as the results of the scored correct responses and inter-grader reliability. As mentioned earlier, one of the students (Cain) in Ms. Lang’s was moving (and periodically unavailable prior to the move), so I did not have a chance to give all parts of the final maintenance to probe to him. While there was agreement between the grader and I that Judd correctly responded to the 10 questions, I
scored eight out of 10 of Rose’s responses correct, while the grader scored only seven of Rose’s responses correct, resulting in an inter-grader reliability of 88%. I scored Rose’s responses to two questions over the first vignette as being incorrect. The first question she responded to inaccurately required the students to identify the correct conflict resolution strategy used in the vignette, and the second question asked them to identify the correct basic need or needs. Rose incorrectly identified the forcing strategy used in the vignette to be a problem solving strategy. She also incorrectly identified the need illustrated in the first vignette to be freedom, when the correct response could have been belonging, power, or both. The grader also scored Rose’s response to the question addressing needs in the second vignette as incorrect because Rose only stated belonging as the need, and the grader thought both belonging and power should have been stated.

Attitude Measures

Student Attitude Measures

Table 40 shows the results of the student responses to the first attitude assessment in both Lang’s and Smit’s classes combined. All of the students in Lang’s and Smit’s classes answered that they liked learning the problem solving negotiation procedure, felt they had learned a lot about negotiation, and were glad they had learned to negotiate using problem solving. However, one student was neutral about whether or not he would use problem solving more in school after the instructional training, and two students were neutral about whether or not they would use problem solving more at home after the training. All of the students except one responded that what they liked best about learning how to negotiate was playing games or reading the stories (role plays and vignettes). One student stated no preferences. Three students stated that what they liked the least was an argument that had
happened between two of them during one of the lessons. Three students stated there was nothing they liked the least about learning how to negotiate.

Table 39

*Lang’s Maintenance Probe 3 Scores and Inter-Grader Reliability (Application Part 2)*

<table>
<thead>
<tr>
<th>Student</th>
<th>Researcher’s Score</th>
<th>Grader’s Score</th>
<th>Percent Reliability</th>
<th>Researcher Comments</th>
<th>Grader Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cain</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Judd</td>
<td>10/10</td>
<td>10/10</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rose</td>
<td>8/10</td>
<td>7/10</td>
<td>88%</td>
<td>Strategy in first vignette is forcing, not problem solving. Needs are power and/or belonging, not freedom.</td>
<td>Correct answer in first vignette for strategy should be forcing. Needs in both first and second vignette should be belonging and power.</td>
</tr>
</tbody>
</table>
Table 40

*Student Attitude Assessment One*

<table>
<thead>
<tr>
<th>Items</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I liked learning how to negotiate by using problem solving.</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I feel as though I learned a lot about negotiation.</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I think I will use problem solving in school.</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>I think I will use problem solving at home.</td>
<td>4</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

The thing I liked best about learning how to negotiate was:

The thing I liked least about learning how to negotiate was:

Table 41 shows the results of the student responses, in both Lang’s and Smit’s classes combined, to the second student attitude assessment. Five of the six students felt they had used problem solving more at school and thought learning how to negotiate had helped their behavior at school. One student remained neutral about whether or not he had used problem solving more at school and whether or not the negotiation training had helped his school behavior. Only three of the six students felt they had used problem solving negotiation more at home, with two students remaining neutral, and one disagreeing that he had used it at home. Only three of the six students thought learning to negotiate had helped their behavior
at home, while three remained neutral. All six of the students continued to report they were
glad they had learned to negotiate. Only three of the students made comments. Three
students reported the lessons to be fun, and one student also reported being upset when his
best friend got mad at him during one of the lessons. No other students had any additional
comments to make.

Table 41

Student Attitude Assessment Two

<table>
<thead>
<tr>
<th>Items</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I feel I have used problem solving more at school.</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>I feel I have used problem solving more at home.</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>I think learning how to negotiate has helped my behavior at school.</td>
<td>5</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>I think learning how to negotiate has helped my behavior at home.</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>I am glad that I learned how to negotiate using problem solving.</td>
<td>6</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Are there any other comments you would like to make about learning how to negotiate using problem solving? Three student comments
Teacher Attitude Measures

One teacher attitude assessment was given as a follow-up to determine how teachers felt the problem solving negotiation training had impacted their students, and to see if they would be interested in learning more about negotiation strategies. Table 42 shows the results of the teacher attitude assessment. It should be noted that I also gave the crisis interventionist the attitude assessment. Thus, the scores include the responses of the two teachers, Ms. Lang and Ms. Smit, and the crisis interventionist. All three of the adult respondents agreed that the problem solving negotiation training had helped decrease their students’ use of negative conflict resolution skills in the classroom, though none strongly agreed. One of the adult respondents strongly agreed that the training had improved their own understanding of how to facilitate student use of positive conflict resolution, while two adult respondents agreed. None of the adult respondents reported the training was not helpful for themselves or their students. One of the adult respondents strongly agreed that the problem solving negotiation lessons had helped improve students’ use of positive classroom conflict resolution skills, and two agreed. Finally, two adult respondents agreed they would like to learn more about problem solving negotiation strategies and conflict resolution in the future, and one disagreed. None of the adult respondents made any additional comments.
Table 42

*Teacher Attitude Assessment*

<table>
<thead>
<tr>
<th>Items</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Unsure</th>
</tr>
</thead>
<tbody>
<tr>
<td>I think the problem solving negotiation training helped decrease students’ use of negative conflict resolution skills in the classroom.</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I think the problem solving negotiation training improved my own understanding of how to help my students use positive conflict resolution in the classroom.</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I do not think the problem solving negotiation training was helpful for me or my students.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>I think the problem solving negotiation lessons helped improve my students’ use of positive conflict resolution skills in the classroom.</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>I would like to learn more about problem solving negotiation strategies and conflict resolution in the future.</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Would you like to share any additional comments? No comments were shared.

*Note:* Crisis interventionist responses were included as well as both teacher responses.
CHAPTER 5
DISCUSSION

The results of this study contribute to the continued interest and ongoing search by public school professionals to find ways to proactively decrease aggressive behavior of students, and at the same time increase positive, problem solving conflict resolution styles. The purpose of the study was to investigate the effects of teaching elementary students with challenging behaviors a negotiation procedure using problem solving steps to improve their classroom behavior, as well to improve their choice of conflict resolution strategies. I have organized this discussion around my two original research questions:

1. What is the impact of the negotiation instruction on the students’ use of conflict resolution strategies?

2. What is the impact of the negotiation instruction on student behaviors in the classroom?

I will, therefore, first provide a discussion of the impact of the problem solving negotiation instruction on the students’ use of conflict resolution strategies. Second, I will discuss the impact of the negotiation instruction on student behaviors in the classroom. Third, I will address how well the students learned the problem solving negotiation strategy. Finally, I will address the attitudes of the students and the teachers toward the problem solving negotiation instruction.

Impact of the Negotiation Instruction on the Students’ Use of Conflict Resolution Strategies

I will discuss the impact of the problem solving negotiation instruction on nine specific variables. I will address the effects of the instruction on outcomes of the students’
use of the pro-social conflict resolution strategies of independent student problem solving, student problem solving requiring a teacher prompt, and student problem solving requiring a prompt from the CI. Next, I will discuss the effects of the instruction on the students’ use of the negative conflict resolution strategies of forcing and avoiding, as well as the occurrences of student office referrals. Third, I will discuss the impact of the instruction on outcomes for students’ use of verbal and physical aggression. Finally, I will address the impact of the instruction on the points earned by the students on teacher created behavioral rubrics called point sheets. For the purpose of interpreting the results in this chapter, I am going to focus specifically on Cohen’s $d$ effect sizes and visual data.

Problem Solving

Data on three types of student problem solving were obtained in this study: independent problem solving behavior, problem solving behavior displayed after a teacher prompt, and problem solving behavior displayed after the CI prompt. In this section I will first discuss the implications of the results for each of these behaviors in turn.

**Independent problem solving.** The results of this study indicate that independent problem solving behavior (no prompting required) among students moderately increased after the problem solving negotiation instruction. The effect size was in the medium range ($d = .70$), which provides evidence that the problem solving negotiation instruction had a moderately positive intervention impact.

Visual examination of problem solving occurrences in Smit’s class revealed no increase of independent problem solving during the treatment phase for Smit’s class, and only a slight increase during the first post treatment phase, with independent problem solving occurrences increasing again during the second post phase and remaining higher during the
third post phase. However, visual examination of independent problem solving occurrences in Lang’s class did indicate a noticeable increase during the problem solving negotiation instruction treatment, and Lang’s students continued to maintain higher rates of independent problem solving occurrences throughout the post treatment phases.

Particularly when one examines the visual data, it is apparent that after the full completion of the problem solving negotiation lessons, students’ independent problem solving increased in both classes. However, the strongest effects of the problem solving negotiation instruction can be seen in Lang’s class, perhaps due to the fact that her students had more severe challenging behaviors, and thus more opportunities to practice resolving conflicts, than the students in Ms. Smit’s classroom.

**Problem solving with teacher prompt.** The Cohen’s *d* effect size indicated the impact of the problem solving negotiation instruction on student problem solving behaviors requiring a teacher prompt was slightly less than the impact on independent problem solving. The treatment effect size (*d* = .53) was still in the medium range.

I would like to mention the visual data show that while the number of teacher prompted problem solving behaviors during baseline for Smit’s class was relatively stable, the fact that those occurrences happened during baseline obfuscates a possible causal factor of the negotiation instruction. The fact that some of those occurrences happened shortly before the implementation of the problem solving negotiation training makes determining treatment effects of the problem solving negotiation instruction for Smit’s class even more difficult, especially since upon beginning the instruction in the treatment phase, there were no teacher prompted problem solving occurrences. The visual data even indicate a slight decrease in teacher prompted problem solving behavior during treatment for Smit’s class.
However, one can observe that during the post phases of the study, teacher prompted problem solving behavior for Smit’s class noticeably increased from baseline, which possibly suggests the possibility that the students began to use the problem solving negotiation strategy more once they completed the lessons and gained practice.

According to the visual data, Lang’s class had a slightly noticeable treatment increase for problem solving negotiation requiring a teacher prompt. Lang’s students did exhibit some teacher prompted problem solving negotiations during baseline, but the baseline was stable prior to treatment with no teacher prompted problem solving being displayed at that time. Visual data show a noticeable increase in the number of teacher prompted problem solving occurrences for Lang’s class during treatment, with occurrences remaining higher than both baseline and treatment throughout the post phases. Again, these post phase increases suggest the possibility that the students began to use the problem solving negotiation strategy more once they completed the lessons and gained practice.

Overall, the problem solving negotiation instruction had moderately positive treatment outcomes for increasing student independent problem solving behavior requiring a teacher prompt. Again, the visual data indicate a greater positive impact was made on problem solving behavior requiring a teacher prompt in Lang’s class than in Smit’s class.

**Problem Solving with CI Prompt.** Analysis of student problem solving behaviors requiring a CI prompt resulted in a very small negative effect size ($d = -.18$). For Smit’s class, visual data indicated there was little difference between the number of baseline CI prompted problem solving negotiation occurrences and those occurring during treatment. Post treatment occurrences continued to increase very slightly for Smit’s class, and the
examination of Smit’s visual data indicated a very slight increase over the subsequent phases in problem solving behavior requiring a CI prompt.

For Lang’s class, visual data indicated problem solving behavior requiring a CI prompt showed a very slight decrease of occurrences from baseline to the treatment phase. Again, since CI prompted problem solving behavior was displayed during baseline, any causal interpretation (positive or negative) is obfuscated. Visual data show that subsequent CI prompted problem solving negotiation behavior did increase during post phases to levels slightly higher than those of baseline or treatment.

I believe that the small negative effect size is a result of the relatively small number of occurrences of CI prompted problem solving behaviors during baseline that outnumbered the number of occurrences during the treatment phase. I would like to reiterate the caution given by Parker et al., (2007) to note any desirable trends in data during baseline before making a causative assumption using the PAND index.

Furthermore, while a negative effect size is certainly undesirable, due to the smallness of the effect size and the high degree of data overlap, there is only a slight possibility that the problem solving negotiation training had any impact at all on CI prompted student problem solving behavior. The negative effect size is more likely due to the large amount of overlap and a result of the means for CI prompted problem solving occurrences being very small across all of the study’s phases.

It is also possible there were stronger positive effects of the treatment intervention for independent problem solving behavior due to the likelihood that during any given situation in which teacher prompts were necessary for problem solving negotiations to be attempted, the students were already experiencing an escalating chain of behavior; thus, the escalation made
it more difficult to engage the students in the problem solving negotiation process. Also, since the CI usually only became involved with the students once they had escalated and were fully engaged in a conflict involving verbal and/or physical aggression, it is indeed possible that attempting to give a prompt during the occurrence of the conflict was either not feasible or may have had an adverse effect. According to Torrey and Knable (2002), once a person has become very agitated, it is best for those around that person to talk as little as necessary in order to avoid the possible escalation of behavior. Furthermore, since engagement in conflict creates an emotive fight-or-flight response, it is good to have a time out from the conflicted interaction and to use calming strategies such as encouraging self-distraction from the conflict and encouraging self-calming (Mischel, DeSmet, & Kross, 2006). Prompting a student to engage in problem solving negotiation involves focusing on the conflict at hand and a lot of talking, both of which may well result in an increase of undesirable, aggressive behaviors for a student who is already behaviorally escalated.

For Smit’s and Lang’s classes, treatment means for problem solving behaviors were not always immediately higher than baseline means, and sometimes treatment means were even lower than those during baseline, though all post treatment mean occurrences of problem solving behaviors were higher than those of baseline. However, it is probable that due to the nature of the problem solving negotiation intervention having a designated set of 12 lessons in order to be considered complete, that the treatment effects would not fully impact the students’ problem solving behaviors until at least the first post phase. A variety of problem solving and conflict resolution treatment interventions that require the implementation or modeling of pro-social skills instruction involve the teaching of multiple skills over time prior to the intervention being considered complete (Anliak & Sahin, 2010;
Johnson & Johnson, 2005; Schrumpf et al., 1997; Shuval et al., 2010). Vazsonyi et al. (2010) note there is some indication that violence prevention programs are optimally beneficial to student behavior when students are exposed to the most elements of a program and when the instruction begins during the early elementary years and is supported by more follow-up intervention after two years. Furthermore, Johnson and Johnson (2006) emphasize the importance of repeated opportunities for over learning and embedded curricular practice of conflict resolution strategies in order for students to be able to fully develop positive, non-violent conflict resolution skills.

Overall, there were moderately positive effects of the problem solving negotiation instruction on the outcome variables of independent problem solving and problem solving with teacher prompting. Lang’s class showed greater outcome improvements than Smit’s class in these two areas of behavior, likely due to the fact that Lang’s students had more severe challenging behaviors. While it is possible there may have been a very slight negative impact of the negotiation instruction on CI prompted student problem solving behavior, this is unlikely based upon the visual examination of the classroom data as well as due to the negligible size of the Cohen’s $d$ statistic.

**Avoiding, Forcing, and Office Referrals**

I will now discuss the implications of the results of the treatment intervention data on the undesirable conflict resolution strategies of avoiding, forcing, and office referrals. I am including my discussion of occurrences of office referrals in this section even though it is not a conflict resolution strategy used by students, but rather one used by teachers as a result of severely problematic student behaviors. With respect to avoiding, the PAND data indicate
moderately positive effects of the problem solving negotiation training on decreasing avoiding behavior, with a medium effect size ($d = .68$).

Visual data show that occurrences of avoiding in Smit’s class decreased between baseline and treatment, and avoiding behavior continued to remain lower during the subsequent post phases than occurrences during either baseline or treatment. Again, it is possible that completion of the problem solving negotiation instruction and opportunities for naturalistic practice made a difference in Smit’s students’ avoiding behavior. However, there remains the problem that during the end of Smit’s baseline, a downward trend of avoiding had already begun, so making a causal inference based on the negotiation instruction is hard to do.

Visual data for avoiding also showed a decrease for Lang’s class between baseline and treatment, and there was no indication of a downward trend already occurring during baseline and preceding treatment. Consistent with Smit’s class, visual data show the number of avoiding negotiations occurring during post treatment phases to be consistently lower than those of either baseline or treatment. Once again the continued improvements in student-displayed occurrences of avoiding during the post phases are suggestive of possible effects of lesson completion and subsequent naturalistic practice opportunities in the classroom.

Based on the data from the effect size obtained from the PAND index and visual examination, there was a moderately positive effect of the problem solving negotiation instruction on students’ avoiding behavior. Lang’s class showed a stronger indication of the positive effects of the negotiation instruction than Smit’s class due Smit’s baseline trend.

The problem solving negotiation instructional training appeared to have less of an impact on student forcing negotiations than upon student avoiding negotiations. The PAND
data show a limited impact of the problem solving negotiation training on student forcing behavior, with a small effect size ($d = .35$).

Looking at the visual data, one can see that for Smit’s class, forcing behavior decreased between baseline and treatment, and continued to remain lower than that occurring in either baseline or treatment throughout the post phases. Once again, this post phase improvement is possibly indicative that students’ behavior continued to improve once the lessons were completed and they had opportunities to practice their newly learned problem solving negotiation procedure in real situations.

However, for Lang’s class, visual data show that forcing negotiations actually increased from baseline to treatment. The number of forcing occurrences continued to remain higher during all of the post phases than the number of occurrences during baseline for Lang’s class. I believe there are three likely explanations for this increase. First, upon visual examination of Lang’s graph, one can see what appears to be an increase in student forcing behaviors prior to the treatment phase. Second, due to the high degree of variability of Lang’s data, it is difficult to sort out the possible influence of confounding variables on student forcing behaviors. Third, it is possible that the problem solving negotiation training actually had an impact on Lang’s student behavior that resulted in an unintended increase in forcing occurrences.

There is some indication in the literature that children with externalizing behaviors have deficits in the recognition of facial expressions of others that may cause impaired ability to engage in pro-social behaviors and empathy, as well as to negatively misread the behavioral intentions of others (Carr & Lutjemeier, 2005; Fairchild, Van Goozen, Calder, Stollery, & Goodyer, 2009). Furthermore, Delaney (2009) addresses deficits in information
processing of children with emotional disturbance who display aggressive behaviors and approaches the issue of preventing and decreasing conflict resulting in aggressive behavior from a neurological perspective. According to Delaney (2009), children who are significantly emotionally ill are unable to readily shift from a negative emotional response set due to neurology; she recommends lowering the demands for coping by doing the following: providing children with choices, maintaining a very positive vocal tone during interactions, and by providing a predictable environment. The students served in Lang’s classroom had very severe challenging behaviors (more severe than those served in Smit’s classroom), so it is possible that when the students in Lang’s class attempted to apply the problem solving negotiation procedure they had learned that they misperceived the intentions of their peers or their teachers as being negative or threatening, were unable to shift out of a negative response paradigm, and actually ended up engaging in forcing behavior instead of problem solving behavior, even though their initial intent may have been to negotiate as they had been taught. However, no data were gathered regarding interactive tone and quality of social interactions, consistent classroom structure, or student perception of others’ intentions during this study, so one cannot be certain about the exact variables impacting the student forcing behavior in Lang’s class.

Overall, there is little indication that the problem solving negotiation instruction had a significant impact on decreasing the forcing behaviors of the students. Based on the visual data and phase means, however, there is some indication of a positive impact of the problem solving negotiation training on decreasing student forcing behavior in Smit’s classroom, but not in Lang’s.
Office Referral Occurrences

There was little impact of the problem solving negotiation instruction on student office referrals according to the PAND data. Interestingly, the PAND data show the same small effects of the problem solving negotiation procedure on decreasing the number of occurrences of student office referrals ($d = .35$) as they do on decreasing the number of occurrences of student forcing behavior. These results are not surprising because it is possible that some (not all) incidents of forcing behavior may have resulted in student office referrals, particularly for Lang’s class since her students had the greatest number of student office referrals.

Visual data show Smit’s office referral occurrences decreased to zero during treatment. However, contrary to trends in previous behaviors discussed, the post phase office referral occurrences did not remain consistently lower than treatment occurrences. Very few office referrals occurred at all in Smit’s class, so it would appear that the problem solving negotiation instruction did not have much impact on behaviors causing office referrals in Smit’s class. Such results are not surprising because even though the number of forcing occurrences was higher for Smit’s students than for their office referrals, Smit’s classroom did not serve students with as severe challenging behaviors as those in Lang’s classroom.

Thus, it is likely that during a given conflict Smit’s students were either able to implement a problem solving negotiation strategy, an avoiding strategy, or at least a forcing strategy that did not involve aggression of any sort, and thus probably not warrant an office referral. While avoiding negotiation strategies were not considered to be positive conflict resolution behaviors in this study, they would not have likely resulted in office referrals.
Upon looking at the visual data for Lang’s classroom, one can see that office occurrences decreased slightly during treatment from baseline, with subsequent post phase occurrences remaining consistently lower than baseline but not always lower than treatment. Thus, any possible impact of lesson completion or practice opportunities is not suggested. Also, a downward dip in office referrals for Lang’s class, right before treatment was begun, can be seen making possible instructional effects during the treatment phase unclear.

Impact of Negotiation Instruction on Student Classroom Behaviors

Verbal and Physical Aggression

Next, I will address the implications of the data gathered for the impact of the problem solving negotiation strategy instruction on the students’ use of verbal and physical aggression. I will begin by addressing verbal aggression.

PAND data show a small Cohen’s \( d \) effect size of .38 for the influence of problem solving negotiation instruction on verbal aggression. Thus, there is little evidence that the problem solving negotiation had much impact on students’ use of verbal aggression.

Visual data intimate that Smit’s students displayed very little verbal aggression during any of the phases of the study, so perhaps this particular behavior was not an important one to measure for Smit’s class. Little information about any potential impact of the negotiation instruction can be ascertained when such low rates of verbal behavior occurred. Verbally aggressive behavior simply was not a consistent problem for the students in Smit’s classroom.

One can see however, from the visual data, that Lang’s students did display a problematic amount of verbal aggression during baseline decreasing only slightly during treatment. A decrease of verbal aggression behaviors right before the treatment phase makes
any causal interpretation of instructional intervention effect hard to assess, though post
treatment incidents of verbal aggression were consistently somewhat below baseline, perhaps
again suggesting the possibility of effects of lesson completion and naturalistic opportunities
for practice.

With respect to physical aggression, the PAND data indicate the problem solving
negotiation instruction had a limited effect on student behavior. Only a small effect size for
physical aggression was obtained, $d = .35$.

Visual data for Smit’s classroom make it evident that student physical aggression did
not present a problem for her class because very few incidents of physical aggression
occurred in her classroom during any phase of the study. As was the case for verbal
aggression in Smit’s class, physical aggression was not problematic enough in Smit’s class to
measure; thus, there is no indication that the problem solving negotiation instruction had any
impact on physical aggression.

Physical aggression did present a problem for Lang’s class, with a noticeable
decrease in physically aggressive occurrences during treatment. However, again, due to the
decrease in physical aggression immediately prior to the treatment phase, it is somewhat hard
to make a causal link between the implementation of the problem solving negotiation
instruction and the decrease in physical aggression. However, post phase occurrences
remained consistently lower than baseline and treatment supporting again possible positive
effects of the lesson completion and naturalistic opportunities to practice problem solving
skills. Thus, while the effect sizes for both Smit’s and Lang’s classes were small, there is
some evidence to imply that the problem solving negotiation instruction decreased
occurrences of physical aggression in Lang’s classroom.
It is interesting to note that incidents of physical aggression, forcing behavior, and office referrals all had the same small effect size ($d = .35$). This suggests that the impact of the negotiation instruction was similar on physical aggression, forcing, and office referrals. Though Smit’s classroom had many more incidents of forcing behavior than office referrals or physical aggression, it is probable that because the challenging behaviors displayed by her students were not as severe as those displayed by students in Lang’s classroom, Smit’s students were more likely to implement negotiation strategies, such as forcing (e.g., threatening not to be a classmate’s friend to pressure him or her into a concession), that did not necessarily involve overt aggression. Furthermore, it is also likely that a causative relationship exists between the low rate of verbal aggression displayed by Smit’s students and the low rate of physical aggression displayed by her students. According to Geiger and Fischer (2006) certain types of verbal aggression are likely to escalate into physical aggression. There is also likely a causative relationship between the high rate of verbal aggression in Lang’s classroom and the high rate of physical aggression. However, though the effect sizes for both verbal and physical aggression in the two classrooms were small, when one examines the data from Lang’s classroom one can see that the occurrences of student physical aggression decrease by much more than the incidents of verbal aggression. It is possible that the problem solving negotiation instruction provided Lang’s students with enough additional verbal communication skills that they were able to engage in de-escalation coping strategies that prevented the verbal aggression from consistently escalating into physical aggression.
Student Learning of the Problem Solving Negotiation Strategy

All students were able to adequately learn and apply the problem solving negotiation strategy. All students were able to recall the problem solving negotiation steps immediately after the instruction without re-teaching, though some of the students required picture prompts or both picture and verbal prompts to be able to state all of the steps. During subsequent phases of the study, some of the students required re-teaching to be able to recall the steps. It is thus possible that over time the students might have forgotten the steps without consistently scheduled re-teaching. Johnson and Johnson (2006) emphasize the need for students to overlearn the conflict resolution skills involved in negotiation and mediation distributed over time and embedded into their academic curriculum. Students were able to apply the main concepts involved in the problem solving negotiation strategy correctly on the majority of their responses for the acquisition and maintenance measures. Scores on the first part of the application measure ranged from a high of 8 out of 8 correct responses to a low of 5 out of 8 correct responses. Scores on the second part of the application measure ranged from a high of 10 out of 10 correct responses to a low of 7 out of 10 correct responses. Again, it is possible, especially since some of the students did not respond correctly on 100% of the application items, that without opportunities for distributed overlearning, the students might experience a decay in retaining how to apply the problem solving negotiation strategy correctly.

Attitudes Toward Problem Solving Negotiation Instruction

Overall, both student and teacher attitudes toward the problem solving negotiation instruction were positive, though results regarding generalization to home appeared mixed. All of the students stated that they enjoyed the instruction and were glad they had learned had
to negotiate using problem solving. However, I would like to reiterate that students were more optimistic about actually using their newly learned problem solving negotiation skills at school than they were about using them at home. Consistent with the findings of Borbely, Graber, Nichols, Brooks-Gunn, and Botvin (2005), it is possible that the students did not possess the assertiveness skills to give them confidence that they could actually apply the problem solving negotiation strategy with their parents/guardians at home. Borbely et al. (2005) also found that adolescents displayed much better communication skills with their class peers than with their parents and interestingly, were better at managing anxiety during a conflict with peers versus parents. Anliac and Sahin (2010) put an emphasis on including communications to parents about monthly activities that they could do with their children at home during their I Can Problem Solve cognitive problem solving training. Thus, it is possible that had a parental training component been included in the study, students would have felt more positive about being able to apply the problem solving negotiation strategy at home.

Both teachers and the CI thought that the problem solving negotiation procedure had had a positive effect on student conflict resolution skills and their own understanding of helping their students resolve conflict. However, one of the teachers was not interested in learning more about problem solving negotiation strategies and conflict resolution, even though she reported positive attitudes about the training.

Limitations

Research in any naturalistic educational setting faces challenges that create limitations for interpretation. One significant limitation of this study was the fact that due to teacher illness, only two classrooms were able to be included in the data analysis. Evidence
of possible intervention effectiveness would have been more compelling had at least three or more classrooms been included in the study. Two, of course, is the minimum number of baselines that can be included in a multiple baseline study. However, including only two baselines limits the interpretation of the possible treatment intervention effects and their generalization to a broader student population, whereas including more than two baselines serves to strengthen the interpretation (Kazdin, 1982).

A second limitation of this study was the fact that Lang’s and Smit’s classrooms were not matched for severity of student challenging behavior. Riley-Tillman and Burns (2009) recommend matching participant characteristics to the degree possible. While both Lang’s and Smit’s classrooms served students with significant challenging behaviors, the students in Lang’s classroom had more severe behavioral problems than those in Smit’s class. Again, because the two classrooms were not matched by severity level of behaviors, generalization to a broader student population may be limited. I would like to mention here that it is also probable that data were confounded due the fact that if a conflict was not occurring, then there was not an opportunity for students to engage in negotiation behavior of any type. Thus, it is likely that there was stronger evidence of impact of the treatment intervention on Lang’s class simply because more conflicts were occurring among her students.

A third limitation in the study was created by the number of behaviors that were measured. Too many individual student graphs were generated for this study due to the number of behavioral components measured; furthermore, individual student graphs displayed such variability of data, they had little meaning, so they were not included in the data analysis. In the future, I would limit the number of conflict behavioral components that I was measuring to one or two if I wanted to include an analysis of multiple, individual
students, and I would do numerous pre-observations prior to beginning a study if possible in order to determine which student conflict behaviors were the most critical to address for a given classroom, and to assess possible confounding variables.

Another possible limitation is that though I consistently taught the negotiation procedure steps and followed the lesson guidelines from Schrumpf et al. (1997), I created modified lessons to include some of the concepts created by Glasser (1998), Bodine et al. (1994), and concepts from Johnson and Johnson (1995), as well as some of my own role plays and activities. While I think my lesson modifications served to accommodate the needs of the participating students, some who had learning disabilities as well as challenging behaviors, it is possible that had Schrumpf et al.’s program, or any one conflict resolution program, been strictly followed, results would have been different.

Furthermore, the treatment would have been stronger had I been able to teach the same problem solving negotiation lessons to the teachers that I taught to the students. Providing identical problem solving negotiation instruction to the teachers would have ensured more practice and over-learning opportunities for the students and would have ensured integrity of teacher understanding of the application of problem solving negotiation within the classroom setting. With a stronger treatment that included the teachers in the instruction, results likely would have been more robust.

There were two final possible limitations of the study I would like to mention: the fact that the participating teachers and CI knew me personally, and due to time constraints, I could not always wait for a baseline trend to stabilize. While I do not think the fact that the CI and teachers knew me personally actually had any significant impact on the results of this study, it still must be considered. I do believe my data would have shown more clear results
had I not been affected by the time constraints in place. Also, continuing ongoing data
collection throughout the course of two years, instead of one, while giving students multiple
opportunities for re-teaching and practice of the problem solving negotiation strategy would
potentially yield more robust results.

Implications for Future Research

This study contributed to the knowledge bases in existing literature for conflict
resolution, as well as for the field of behavioral disorders. Results of the study are
encouraging due to the fact that despite the limitations of the instructional treatment
intervention, there were moderate, but encouraging results. Such results suggest the need for
ongoing, future research that specifically targets the effects of problem solving negotiation
interventions on both the pro-social and challenging behaviors of students identified as
having behavioral disorders.

Specifically, future research on the effects of problem solving negotiation instruction
should include the investigation of any impact that teaching problem solving negotiation
might have on academic performance. With the current high stakes test and punish zeitgeist,
it would be both prudent and telling to be able to delineate any effects of the skills involved
in problem solving negotiation on improving the acquisition of academic skills. It is possible
that learning how to negotiate with problem solving might afford both students and teachers
the opportunity to focus more on instructional goals than on the behavioral management of
conflicts. It is also possible that repeated practice of the problem solving negotiation process
might positively impact the way students approach academic tasks that create frustration, and
thus encourage increased student help-seeking behavior from teachers because students
might feel more comfortable advocating for themselves through negotiation if tasks are too
difficult.

It would be interesting to attempt a multiple element design and compare results of
the implementation of the problem solving negotiation intervention with the results of a
strictly reinforcement-based, behavioral intervention that relies only on functional behavioral
assessment and reinforcement procedures. Functional behavioral assessment and
reinforcement procedures are integral pieces of special education classrooms serving students
with challenging behaviors. However, providing instruction in negotiation is not always
integrated within the structures of these classrooms.

Overall, while the positive impact of the problem solving negotiation instruction was
moderate for only the three student outcome measures of independent problem solving,
problem solving requiring a teacher prompt, and avoiding, even an indication of a moderately
positive impact on increasing these three pro-social student behaviors and decreasing the
negative behavior of avoiding has encouraging implications for implementing conflict
resolution instruction in the classroom, and thus supports continued research and
investigation. The results of the study are particularly encouraging due to the limited
instructional time provided for the intervention; had teachers been actively involved in
delivering the problem solving negotiation instruction and supporting it consistently
throughout the school day, it is likely that the results would have been even more robust.
Also, while the impact on targeted behaviors of forcing, verbal, and physical aggression was
small, the visual analysis of individual class data suggest the possibility of positive classroom
intervention outcomes given a stronger research design involving more participants who are
matched for severity of challenging behavior. Ongoing observation and data collection for
multiple classrooms that include teachers in the same problem solving negotiation instructional training that students receive are clearly needed to determine the strength of the intervention effects and whether or not students are able to consistently and fluently apply the steps and skills involved.

Finally, designing a study that also would provide concurrent problem solving negotiation instruction to parents of students with challenging behaviors is implicated. A number of the student responses on the attitude assessments showed a possible lack of generalization to the home environment. Thus, one is led to wonder if more consistent, positive outcomes could be obtained if parents were included in the instructional training of problem solving negotiation strategies.

**Implications for Practice**

There are several significant implications of this study for educators, school counselors, and school administrators about the potential benefits of implementing conflict resolution instruction within schools. Many sources in the literature already support such instruction. I believe that teaching students to negotiate using the six-step problem solving process is easier and more pragmatic to implement than teaching students to be mediators, given the scheduling structure and academic demands in public schools. Problem solving negotiation instruction may be embedded within class lessons that engage students in the constructive controversy described by Johnson and Johnson (2006), or easily taught as part of social skills instruction.

Interesting information was garnered from this study about the differences between Lang’s and Smit’s classrooms. Namely, when visual data were examined, it appeared that Lang’s students had a more significant response to the intervention than Smit’s students.
This observation supports evidence in the literature which has found that students who have the most severe challenging behaviors are more likely to demonstrate the most pro-social benefits from programs designed to teach cognitive and social skills to prevent aggressive, externalizing behaviors (Hartman, Stein, Eichelberger, Hanisch, Pluck, Walter, & Dopfner, 2010; Vazsonyi et al., 2011). However, Smit’s students appear to have had a positive treatment intervention response in terms of decreased forcing behavior, while the forcing behaviors of Lang’s students actually increased throughout the study; thus one cannot unequivocally assume that the problem solving negotiation intervention necessarily benefited Lang’s students more than Smit’s students.

Perhaps the most positive implication for practice of this study is that the data suggest conflict resolution instruction has the potential to increase the independent use of problem solving negotiations by students who have challenging behaviors. Schools are constantly looking for ways to improve learning outcomes for students receiving special education in our current high stakes testing political climate. Certainly, if students with challenging behaviors are able to engage in the independent use of problem solving negotiations and other conflict resolution skills, less instructional time can be spent on behavior management and more on teaching academics.

**Summary**

This study investigated the impact of teaching six elementary students a problem solving negotiation strategy in order to positively resolve conflicts on the following student classroom behaviors: independent problem solving, problem solving requiring a teacher prompt, problem solving requiring a CI prompt, avoiding, forcing, behaviors resulting in office referral, verbal aggression, and physical aggression. Overall, results of this study
suggest that students with challenging behaviors are both able to learn the problem solving negotiation strategy and obtain pro-social benefits from the instruction. The study also provides some evidence that students with the most serious challenging behaviors may benefit more than those students with less serious behavior problems from negotiation instruction.

Moreover, the theoretical bases of conflict resolution clearly delineate the importance that individuals place on both meeting their goals and maintaining their relationships (Deutsch, 1993; Deutsch, 2006; Johnson & Johnson, 2009). Unfortunately, students with challenging behaviors often lack the self-efficacy skills to determine how to apply problem solving negotiation even if they do want to maintain a relationship. Further investigations of the impact of providing instruction in problem solving negotiation strategies to students with challenging behavior may provide critically needed information about the ways in which such conflict resolution strategies can benefit these students in maintaining positive relationships, as well as to decrease behaviors that are considered relationally destructive and negatively affect the classroom learning environment.
APPENDIX A

Institutional Review Board (IRB) Approval Form and Approved Parent/Student Consent Forms
Date: November 10, 2009

To: Cathy Bullock
2826 Heathrow #69
Ames, IA 50014

CC: Dr. Anne Foege
N162D Lagomarcino

From: Office for Responsible Research

Title: Teaching Students with Behavioral Disorders to Use a Negotiation Procedure: Impact on Classroom Behavior and Conflict Resolution Strategy

IRB ID: 09-504

Submission Type: New Study Review Date: 10 November 2009

The project referenced above has undergone review by the Institutional Review Board (IRB) and has been declared exempt from the requirements of the human subject protections regulations as described in 45 CFR 46.101(b). The IRB determination of exemption means that:

- You do not need to submit an application for annual continuing review.

- You must carry out the research as proposed in the IRB application, including obtaining and documenting informed consent if you have stated in your application that you will do so or if required by the IRB.

- Any modification of this research should be submitted to the IRB on a Continuing Review and/or Modification form, prior to making any changes, to determine if the project still meets the federal criteria for exemption. If it is determined that exemption is no longer warranted, then an IRB proposal will need to be submitted and approved before proceeding with data collection.

Please be sure to use only the approved study materials in your research, including the recruitment materials and informed consent documents that have the IRB approval stamp.

Please note that you must submit all research involving human participants for review by the IRB. Only the IRB may make the determination of exemption, even if you conduct a study in the future that is exactly like this study.
Date

Dear Student:

This year, I will be working with your teachers at [Elementary School] to teach you a new way to negotiate to resolve your arguments. Your teachers and I would like to investigate whether or not learning a new way to negotiate will improve your classroom behavior. To do this, we need your permission to allow me to teach you some lessons in how to handle conflict and how to solve problems with someone you have a disagreement with them. It will take approximately two and one-half weeks for me to teach you the lessons. We also need your permission to use your daily behavior sheets, so I can make some graphs and see if teaching you a new way to negotiate works to help improve your classroom behavior.

Your name will be removed from your point sheets and will not be in my final report. Your decision to participate or not to participate in the study will not affect your grades in any way.

If you give your permission for your participation in my study, please check the YES line and print and sign your name below. If you do not give your permission for your participation in my study, please check the NO line and print and sign your name.

Sincerely,

[Name]
Doctoral Student/Instructor

______________________________
YES: I give permission for my participation in the study.

______________________________
NO: I do not give permission for my participation in the study.

Teacher:

______________________________
Date:

______________________________

[Name]
Teacher:

______________________________
Date:

Signature:

THANK YOU!
Dear Parent/Guardian,

This year, I will be working with [Elementary School] through Iowa State University on a research project titled "Teaching Students with Behavioral Disorders to Use a Negotiation Procedure: Impact on Classroom Behavior and Conflict Resolution Strategies." The purpose of this project is to examine the effects of teaching elementary students with behavioral problems a negotiation procedure on classroom behavior and on the students' use of conflict resolution strategies. This letter is to provide you with information about this project and request consent for your child to participate in the study.

As part of the study, students will be taught to use a negotiation strategy to resolve disagreements. The negotiation strategy will be taught within the context of a conflict resolution training curriculum. Learning the negotiation strategy will be minimally disruptive to your child's daily educational process, because it will be taught as part of the social skills instruction required in programs for students with behavioral problems. Students will be taught the negotiation strategy in one to two hour blocks of time, with breaks as needed. Students will receive a total of 16 lessons in negotiation and conflict resolution. The training will take approximately two and one-half weeks. In addition, information will be gathered from students' school records, IEP's, daily behavior sheets, and anecdotal records.

Information will be authored and recorded only for those students who have permission to participate in the study. All student names will be confidential and will never appear in the results. Participation in the study (or lack thereof) will not impact your child's grade in any way. If you would like to receive a written summary of the study results, please indicate on this form below or send a note with your name, your child's name, and your address to the following address:

Cathy Bullock
Iowa State University
2041 Lagomarino Hall
Ames, IA 50011

The results of this study will provide information that will help teachers better teach social skills to students with behavior problems. Your child's participation in the study is voluntary. Please indicate below whether you give your consent for your child to take part in the study, sign the lower portion of this letter, and return it with your child by [date goes here]. You are free to withdraw your consent at any time by sending a written request to me or to your child's teacher. If you have any questions about the study, please feel free to call me at (515) 294-3396, my major professor, Dr. Anne Foggia at (515) 294-3373, or for assistance, your child's teacher.

Sincerely,

Cathy Bullock, M.Ed.

YES, I give my permission for [print child's name] to participate in the study.

YES, I would like to receive a copy of the summary of results.

NO, I refuse permission for [print child's name] to participate in the study.

[Signature]

RETURN TO YOUR CHILD'S TEACHER BY [DATE GOES HERE]!  THANK YOU!
APPENDIX B

Negotiation Strategy Vignettes Used in Teacher Training
Teacher Training Vignettes

**Vignette #1**
Mr. Jones asked Mr. Travis if he could continue to use Mr. Travis’s classroom for his after school club’s activities. Mr. Travis was very upset at this request because his classroom had been used the entire first semester for Mr. Jones’s after school club. Mr. Travis had asked Mr. Jones a while ago to use a different room this semester. Instead of reminding Mr. Jones about using another room, Mr. Travis stopped speaking to Mr. Jones and tried not to pass him in the hallway.

What conflict resolution strategy did Mr. Travis use?

**Vignette #2**
Mrs. Drake and Mrs. Smith formerly team taught a language arts class. However, the principal recently changed the teams, and Mrs. Drake and Mrs. Smith no longer teach together. Mrs. Drake teaches with Mrs. Little now instead of Mrs. Smith. Mrs. Smith and Mrs. Drake became good friends during their years of team teaching, so they often eat lunch together at school and even meet socially after school. Mrs. Little feels left out and excluded, especially since Mrs. Drake never invites her to lunch. Mrs. Little decides to tell Mrs. Drake how she feels. Mrs. Drake agrees that it would be a good idea to start inviting Mrs. Little to lunch. The three teachers become friends and enjoy sharing instructional ideas with each other.

What conflict resolution strategy did Mrs. Little use?

**Vignette #3**
Dina and Dave are good friends. They have also taught at the same school for several years, and they often visit with each other on breaks, at lunch, or between classes when they have a little free time. Dina teaches science, and Dave teaches English. It has been a crazy week, and on Wednesday a few students they share must be pulled out of English or science to work on a special student council project. The students are behind in their class work in science, but they are ahead in their class work in English; so Dina asks Dave if he would mind allowing the students to be pulled out of his class. Dave has a hard time with schedule changes and does not want to change his schedule; so he tells Dina that the students may not be pulled out of his class. Dave also tells Dina that his English class is harder for him to adjust than her science class. Dina wishes she could convince Dave to be more flexible, but decides to say nothing to him. Instead, she stops visiting with Dave during her free time and rarely talks to him anymore. Dave is confused and doesn’t understand why Dina no longer visits with him or talks to him, but he does not say anything to Dina.

What conflict resolution strategy are Dina and Dave using?
Vignette #4
Ms. Honey and Ms. Darling are special education teachers. They have been informed that instead of each having their own teaching assistant, they must now share only one due to budget cuts. Ms. Honey’s busiest time is from 8:00 a.m. to noon, so she asks Ms. Darling if she can have the assistant in her room during that time. However, Ms. Darling also has her busiest time from 8:00 a.m. to noon and would like the assistant present in her class during that time. The two teachers brainstorm and decide to have a rotating morning schedule for the teaching assistant.

What conflict resolution strategy did Ms. Honey and Ms. Darling use?

Vignette #5
Mr. Klever and Mr. Gerald are both 8th grade middle school football coaches. Both coaches are very competitive on and off the field. They do not particularly like each other. Mr. Gerald also coaches a team not affiliated with the school that schedules games on Saturdays. This week, Mr. Klever has assigned Saturday School detention to a student who is the star player on Mr. Gerald’s Saturday football team. Mr. Gerald requests that the student be allowed to serve Saturday School detention during another weekend, when a game is not scheduled. However, Mr. Klever insists that the student will not learn to accept consequences for his actions if he is permitted to serve detention at his convenience; so Mr. Klever refuses to change the date of the detention. Mr. Gerald becomes very angry, calls Mr. Klever an unreasonable jerk, and stomps off to the principal’s office to try to convince the principal to make Mr. Klever change the detention time.

What conflict resolution strategy is Mr. Gerald using?
APPENDIX C

Daily Behavioral Observation Recording Sheet
# Daily Behavioral Observation Recording Sheet

<table>
<thead>
<tr>
<th>Student</th>
<th>V.A.</th>
<th>P.A.</th>
<th>P.S. w/o Teacher Prompt</th>
<th>P.S. w/Teacher Prompt</th>
<th>P.S. w/C.I Prompt</th>
<th>Forcing</th>
<th>Avoidance</th>
<th>Office</th>
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Date:

Teacher:

Key: V.A. = Verbal Aggression  
P.A. = Physical Aggression  
P.S. = Problem Solving  
C.I. = Crisis Interventionist

Directions: Tally each occurrence of the behavior by the student’s name.

Comments:
APPENDIX D

Problem Solving Negotiation Lesson Plans
Problem Solving Negotiation Lessons

Lesson One

Goals

Rapport will be established with students.

The students will collaborate with the teacher to create behavioral ground rules for instructional sessions.

The students will begin to develop an understanding of the basic concepts of conflict resolution and negotiation.

Activity One

Introduce myself and explain the purpose of the problem solving negotiation instruction.

Lead the students in creating a list of behavioral ground rules written on a large piece of paper to use during future lessons. Explain the types of reinforcers that can be earned during instruction, and give students index cards to save their stickers on if they would like.

Activity Two

Play the reporter game with the students as a warm-up activity for the students and I to get to know each other. In this game, the students will be paired-up with each other or me. We will each have a maximum of five minutes to interview each other by asking the following questions:

- What is your favorite thing to do for fun? Why?
- What kinds of things do you like to do during your free time?
- What subject do you like best in school?
- What subject do you like least in school?
- What has been the best thing about your day today?
Each interviewer will share with the group the information he or she learned about his or her partner.

**Activity Three**

I will introduce the students to the basic concepts of conflict resolution by having them volunteer to read the role play script for this lesson. If the reading is too difficult, or no students volunteer, I will read the role play by myself. Use the role play to lead a brief, introductory discussion of the six problem solving steps. Next, I will display the problem solving steps and a picture cue for each step on a laminated piece of paper. Last, I will review the steps with the students orally.

**Activity Four**

I will display the following words on large index cards: conflict, negotiation, problem solving, points of view, and win-win. Orally review the words with the students and briefly discuss their meaning and how they apply to understanding and solving conflicts. Next, display pictures cut out from magazines of people engaged in social interactions. Have the students state if the interactions look like they are positive or negative. Discuss how negative social interactions can lead to conflicts. If there is time, have students give examples of some interactions they have had that led to conflicts.
Lesson Two

Goals

Continue to establish rapport with students.

Students will develop a more complete understanding of conflict and conflict resolution.

The students will begin to develop an understanding of three negotiation strategies used to resolve conflict: forcing, avoiding, and problem solving.

The students will begin to learn the six problem solving steps.

Activity One

I will lead the students in a game called “High/Low.” In the game, the students take turns describing the best part (“high”) of their day so far and the worst part (“low”) of their day so far.

Activity Two

I will draw two columns on newsprint and place a plus sign at the top of one column and a minus sign at the top of the other column. Next, I will ask the students to state words or phrase that come to mind when they hear the word “conflict.” I will write each word or phrase in the appropriately corresponding column. I will lead a discussion that explains how conflict can be positive as well as negative.

Activity Three

I will briefly review the conflict terminology in lesson one and answer any questions the students may have about the terms.

Activity Four

I will write the seven statements about conflict from Schrumpf, Crawford, and Bodine’s Student Manual (1997, p. 9) on index cards and place the cards in a deck in the middle of a
table. The students will take turns drawing the cards and reading the statements (with my assistance if necessary). The seven statements are as follows:

Conflict is a part of everyday life.
Conflict can be handled in positive or negative ways.
Conflict can have either creative or destructive results.
Conflict can be a positive force for personal growth and social change.
Conflict will happen; violence does not have to happen.
It is not our choice whether or not to have conflict.
It is our choice to act when we do have conflict.

I will lead a brief discussion of the meaning of each statement.

**Activity Five**
I will read three vignettes to the students (students may read if they choose) that each give an example of forcing, avoiding, and problem solving. Using these vignettes, I will lead a discussion of the meaning of each term. Next, I will ask the students to share personal examples of conflicts they believe they resolved using forcing, avoiding, and problem solving.

**Activity Six**
Each problem solving step with its corresponding picture cue will be written on an index card and placed in a deck. The cards will be shuffled, and the students must work together to place the steps written on the cards in correct order. I will provide help if needed.
Lesson Three

Goals

Rapport will be established with students.

The students will continue to develop an understanding of the three negotiation strategies of forcing, avoiding, and problem solving.

The students will continue to learn the steps of the problem solving process.

The students will begin to develop an understanding of the basic needs: belonging, power, freedom, and fun and will understand how not getting these needs met can create conflict.

The students will begin to develop an understanding of the ways in which limited resources and diversity may cause conflict.

Activity One

The students and I will play a brief, modified version of the game “Simon Says.” The game will be modified to include statements about the types of negotiation strategies used by the students during the day, the type of day they have had, and some of their likes and dislikes.

Examples of statements that might be used during the game are:

Simon says stand up if you used problem solving today.

Simon says raise your left hand if you have had a good morning.

Simon says clap your hands if you like P.E.

Activity Two

I will have the students practice the concepts of problem solving negotiation by having them volunteer to read the role play script for this lesson. If the reading is too difficult, or no students volunteer, I will read the role play by myself. I will use the role play to lead a brief discussion of the six problem solving steps.
Activity Three
I will introduce the basic needs belonging, power, freedom, and fun. I will ask the students to describe some of the things people do to get these four needs met. Next, I will give the students magazines, scissors, construction paper, and glue and instruct them to each make a collage that shows people getting their four basic needs met. The students will share their collages when they are finished, and I will facilitate more discussion on the four basic needs.

Activity Four
I will have the students play the game “Guess Who” in partners. I will instruct the students to think about the differences in the characters they are describing in the game and some of the things people might think about the characters based on the way they look. I will set a timer to make sure the game does not last longer than ten minutes. After the students play the game, I will lead the students in a discussion on the ways people are different and how lack of respect for differences can lead to conflict.

Activity Five
I will introduce and display the word “resources.” I will tell the students that we are going to play the card game “Slap Jack.” If the students have not heard of “Slap Jack” before, I will tell them how to play. I will explain that the game will be played unfairly so that one student gets to sit closer to the deck than the others. I will also explain that sometimes even if a student “slaps the Jack” first, I may take all the cards for myself or give them to another student. After the game, I will lead a discussion about how unfair access to resources and unfair ideas may create conflict. Prior to the game, I will caution the students to avoid becoming angry during the unfair game.
Lesson Four

Goals

Rapport will be established with students.

The students will continue to develop an understanding of the three negotiation strategies of forcing, avoiding, and problem solving.

The students will continue to learn the steps of the problem solving process.

The students will continue to develop an understanding of the four basic needs.

The students will be able to recognize and describe peacemaking behavior and violent behavior.

The students will understand the four principals of conflict resolution.

Activity One

The students may choose to play the high/low game or modified “Simon Says.”

Activity Two

I will ask the students to share any of the negotiation strategies (forcing, avoiding, problem solving) they have used in a conflict they choose to disclose and ask them which basic need or needs they were trying to get met. If students do not wish to disclose a conflict, I will skip this activity.

Activity Three

I will ask the students to volunteer to take turns reading three conflict vignettes using the negotiation strategies of forcing, avoiding, and problem solving. I will instruct the students to identify the negotiation strategy used in each vignette, as well as the basic need or needs.
**Activity Four**

I will instruct the students to cut-out pictures in magazines to create a poster of people engaging in peacemaking behavior and in violent behavior. The peacemaking pictures will be placed on one side of the collage and the pictures of violent behavior will be placed on the other side of the collage. I will ask the students to identify the basic needs they think the people in the pictures are trying to get met.

**Activity Five**

I will read the short story, “Making Peace,” (Schrumpf, Crawford, & Bodine, 1994, pp. 51-52) to introduce the students to the four principles of conflict resolution: separate the people from the problem, focus on needs not wants, brainstorm fair ideas, and be fair when creating an agreement. After reading the story I will display the four principles on a dry erase board and discuss the story with the students and the problem solving steps used in the story. (I would like to note that Schrumpf, Crawford, and Bodine (1994) use slightly different language to describe the four principles than the terms I am using. I have modified the language to make it more understandable for the students with whom I am working.)
Lesson Five

Goals

Rapport will be established with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will be able to identify and apply the concepts of active listening.

The students will continue to learn the six problem solving steps.

Activity One

I will ask the students to make a face, without speaking, that shows the kind of day they have had. I will instruct the students to observe each other and guess what kind of day their peers have had. Next, I will tell the students that sometimes our facial expressions and body language communicates the emotions we are feeling and that we need to be observant of the body language of ourselves and of others to be good listeners. I will then introduce the term: active listening. I will explain to the students that they will learn how to be active listeners in this lesson, so they can use active listening skills to help resolve conflict. I will tell the students that we will use three skills involved in active listening: attending, summarizing, and clarifying (Schrumpf, Crawford, and Bodine, 1997).

Activity Two

I will ask the students to tell me what they think the word communication means and how they think we can avoid misunderstandings when we communicate. Next, I will place words or phrases written on folded pieces of paper into a hat. Each of the words and phrases represent a communication pitfall according to Schrumpf, Crawford, and Bodine (1997, p.
The words and phrases are as follows: interrupt, offer advice, judge, ridicule, criticize, distract, and bring up your own experience. I will use the words to complete a modified version of the communication skills activity designed by Schrumpf, Crawford, and Bodine (1997, pp. 132-133). The activity will be slightly modified to accommodate the needs of the students. In this activity, I will instruct the students to read (with my help if necessary) the words or phrases they draw from the hat and tell me what they think each word or phrase means. Next, I will one-by-one, tape each pitfall to my shirt and instruct the students to take turns responding to me according the pitfall as I describe my day to them. Finally, I will process the behavior associated with each pitfall with the students and the basic needs that people may be trying to meet when they use these pitfalls.

**Activity Three**

I will introduce the concept of attending by having the students complete a modified version of Schrumpf, Crawford, and Bodine’s (1997, p. 134) attending exercise. The activity will be slightly modified to accommodate the needs of the students. For the attending exercise, I will ask the students to volunteer to describe their perfect Saturday to me. The student will be allowed one minute to complete his or her description. As the student describes his or her perfect Saturday, I will model attending behaviors such as nodding my head, making eye contact, leaning forward, and displaying utterances such as “uh-huh,” “interesting,” “o.k.,” etc. After the minute is up, I will ask the students how they could tell that I was attending or paying attention to what the speaker was saying.

**Activity Four**

I will introduce the students to the concept of summarizing by having them complete a modified version of Schrumpf, Crawford, and Bodine’s (1997, p. 135) summarizing exercise.
The activity will be slightly modified to accommodate the needs of the students. During the summarizing exercise, I will ask for a student to volunteer to describe a conflict he or she has had, or a time when he or she had a very bad day. The student will be allowed one minute to complete their description. As the student gives his or her description, I will display attending behaviors for one minute. After the minute is up, I will model two behaviors: restating the most important points I heard about the conflict and reflecting my understanding of the feelings involved in the conflict. Finally, I will tell the students that summarizing involves briefly restating the most important facts and describing feelings.

Activity Five

I will introduce the students to the concept of clarifying by having them complete a modified version of Schrumpf, Crawford, and Bodine’s (1997, p. 136) clarifying exercise. The activity will be slightly modified to accommodate the needs of the students. Again, I will ask a student to describe a conflict he or she has had or a very bad day, but this time I will allow the student two minutes to talk. During the description, I will model attending and summarizing behaviors. However, I will also model clarifying behaviors by asking open-ended questions to get additional information and to make sure that I understand what is being said. I will ask such questions as:

   How did that make you feel?

   What happened next?

   Do you have anything else to add?

After this activity has been completed, I will lead the students in a brief discussion of the difference between open-ended and yes/no questions.
Activity Six

Each problem solving step with its corresponding picture cue will be written on an index card and placed in a deck. The cards will be shuffled, and the students must work together to place the steps written on the cards in correct order. I will provide help if needed.
**Lesson Six**

**Goals**

Rapport will be established with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will be able to apply the concepts of active listening.

The students will be able to understand the qualities of a good negotiator.

The students will continue to learn the six problem solving steps.

**Activity One**

I will have the students complete a modified version of Schrumpf, Crawford, and Bodine’s peer mediation (1997, p. 141) “Statements about Me,” activity. The activity will be slightly modified to accommodate the needs of the students. The “Statements about Me,” activity involves completing the following sentence fragments:

My peers describe me as…

I get frustrated with…

One way I relax is…

My parents describe me as…

I get angry when…

A quality I expect in a friend is…

I trust someone if…

I feel treated unfairly when…

One way I show respect is…
I am prejudiced toward…

I will be a good negotiator because…

I will begin the activity by holding a toy magic wand and reading and answering the first sentence fragment. Next, I will explain to the students that we will pass around the magic wand to each other, and the person with the wand must quickly complete the sentence fragment that I read. Every student must complete the sentence fragment about being a good negotiator. I will use this activity to lead into a discussion of the qualities of a good negotiator according to Schrumpf, Crawford, and Bodine (1997, pp. 142-144): good listener, respectful, trustworthy, and helps people work together. I would like to note that I have shortened the list of qualities and slightly modified the language to meet the students’ needs.

**Activity Two**

I will instruct the students to display active listening skills as I read, or allow the students to volunteer to read three vignettes of conflicts and negotiation strategies involving forcing, avoiding, and problem solving. I will instruct the students to identify the negotiation strategy being used in each of the vignettes, as well as the possible basic needs of the people involved in the conflicts. Finally, I will ask the students if they have any ideas about possible ways to problem solve for the vignettes involving forcing and avoiding.

**Activity Three**

The students will play a memory game with the six problem solving steps. In this game, each of the six steps will be written on one side of two sets of index cards. The cards will be spread out and mixed up on a table and turned so the steps are facing down and the blank side is facing up. The students will take turns flipping the cards over to try to find the
matching problem solving steps. The student must be able to read the steps when they get a match in order to keep the cards. The student with the most matches wins.
Lesson Seven

Goals

Rapport will be established with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will be able to apply the concepts of active listening.

The students will continue to learn the six problem solving steps.

Activity One

The students may choose to play the high/low game or modified “Simon Says.”

Activity Two

I will present the students with a role play and allow them to choose to participate in reading it. If they do not want to read the role play, I will read it myself. After the role play is read, I will discuss the role play and the problem solving steps used with the students. I will also ask the students to try to identify the basic needs they think the characters in the role play are trying to meet.

Activity Three

I will instruct the students to display active listening skills as I read three vignettes of conflicts in which the negotiation strategies of forcing, avoiding, and problem solving were used. Students may choose to take turns reading the vignettes themselves. I will instruct the students to identify the negotiation strategy being used in each of the vignettes, as well as the needs of the people in the vignettes. I will also ask the students if they noticed any
communication pitfalls used in the vignettes. Finally, I will ask the students if they any ideas about ways the forcing and avoiding conflicts could have been problem solved.

**Activity Four**

The students will play the memory game to practice learning the six problem solving steps.
Lesson Eight

Goals

Continue to establish rapport with students.

The students will continue to develop an understanding of the three negotiation strategies of forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will continue to practice active listening skills.

The students will develop an understanding of sharing different points of view.

The student will continue to learn the six problem solving steps.

Activity One

The students and I will play the reporter game. During the game, the students and I will take turns interviewing each other in pairs about the events of the day and how the day has gone so far. The starter questions will be the following:

What time did you get up this morning?

What did you have for breakfast?

Have you had a good day so far today? Why or Why not?

What are you doing after school today?

However, students may choose to add or substitute their own questions. I will instruct the students to practice active listening skills. After the students ask each other the questions, they will share-out the information they heard. Their partners will state whether or not the information was accurately shared.
**Activity Two**

First, I will introduce the students to the terms perspective and point-of-view and display them on a white board. Next, I will ask students to choose to volunteer to read the role-play and complete the modified activity, “Red Riding Hood and the Wolf” (Schrumpf, Crawford, and Bodine, pp. 40-42, 1997). The activity will be slightly modified to accommodate the needs of the students. If students do not want to read the role-play or have trouble reading it, I will read it to them. I will give the students either a red piece of construction paper or a brown piece of construction paper. The students with red paper will be told after the role play to describe the point of view of Red Riding Hood in the script, and the students with the brown paper will be asked to describe the point of view of the wolf in the script. Students will be encouraged to display active listening during this activity. I will guide the students in a discussion of the importance of sharing and understanding points-of-view in the problem solving process. Finally, I will ask the students to identify the negotiation strategy being used in the role-play.

**Activity Three**

I will read *The True Story of the 3 Little Pigs!*, (Scieszka, 1989) to the students. After reading the story, I will ask the students to describe the points of view of the wolf and the pigs. I will ask the students to identify the negotiation strategies being used in the in the story and the needs the characters are trying to get met.

**Activity Four**

The students may choose to play the memory game or put together a teacher made puzzle with the problem solving steps and picture cues written on each piece.
Lesson Nine

Goals

Continue to establish rapport with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs and learn to distinguish between needs and wants.

The students will be able to apply the concepts of active listening.

The students will continue to develop an understanding of points-of-view.

The students will continue to learn the six problem solving steps.

Activity One

The students may choose to either play the high/low game, or they may choose a happy face, a neutral face, or a sad face (drawn on a white board) to identify and describe the type of day they have had. I will participate in this activity, as well. I will prompt the students to engage in active listening skills during the activity and to describe each others’ point-of-view about his or her day.

Activity Two

I will display the terms needs and wants on a white board and lead the students in a discussion about the difference between the two. Next, I will ask the students to take turns volunteering to orally read each of the five conflict vignettes in the activity “Focus on Interests,” from Schrumpf, Crawford, and Bodine’s Peer Mediation in the Schools Student Manual (1997, p. 44). If the students do not wish to read aloud, I will read the vignettes to them. Instead of the term interests I will use the term needs. I will prompt the students to
orally summarize what is happening in each vignette and describe the points-of-view of the characters in the vignettes and the negotiation strategy characters are using. Finally, I will ask the students to attempt to identify the needs and wants of the characters in the vignettes.

**Activity Three**

The students may choose to play the memory game or put together a teacher made puzzle with the problem solving steps and picture cues written on each piece.
Lesson Ten

Goals

Continue to establish rapport with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will continue to practice active listening skills.

The students will continue to develop an understanding of points-of-view.

The students will learn how to brainstorm to resolve a conflict.

The student will continue to learn the six problem solving steps.

Activity One

The students may choose to play the high/low game or the modified Simon Says game to share about their day.

Activity Two

I will ask for a student volunteer to describe a conflict he or she has had which they would like to problem solve. If no student chooses to share a conflict, I will use the following teacher created conflict:

My co-worker and I have very old computers. We both want a new computer. We were recently told by our boss that there is money to purchase only one new computer. My co-worker is not speaking to me because she thinks she needs the new computer more than I do since her computer is older than mine. I am not speaking to my co-worker since think I need the computer more than she does because my computer runs slower than hers.
I will instruct the students to describe the points-of-view in the conflict, the negotiation strategy being used, and which possible basic need is trying to be met. Next, I will introduce the concept of brainstorming and display the following four rules for brainstorming (Schrumpf, Crawford, & Bodine, p. 46):

- Say any ideas that come to mind.
- Do not judge or discuss the ideas.
- Come-up with as many ideas as possible.
- Try to think of unusual ideas.

Finally, I will instruct the students to use the rules for brainstorming to create ideas that could be used in a problem solving negotiation strategy to resolve the shared conflict.

**Activity Three**

I will instruct the students to display active listening skills as the students volunteer to orally read three vignettes of conflicts and negotiation strategies involving forcing, avoiding, and problem solving. If no students want to volunteer to orally read the vignettes, I will read them. Next, I will tell the students to identify the negotiation strategy being used in each of the vignettes as well as the basic needs and the points-of-view of the characters in the vignettes. Finally, I will ask the students if they have any ideas about the ways the forcing and avoiding vignettes could have been problem solved.

**Activity Four**

The students may choose to play the memory game or put together a teacher made puzzle with the problem solving steps and picture cues written on each piece.
Lesson Eleven

Goals
Continue to establish rapport with students.
The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.
The students will continue to develop an understanding of the four basic needs.
The students will continue to practice active listening skills.
The students will continue to develop an understanding of the importance of different points of view.
The students will continue to learn how to brainstorm fair ideas.
The students will learn how to evaluate good ideas once the ideas have been brainstormed.
The student will continue to learn the six problem solving steps.

Activity One
The students will play a game similar to Hot Potato. In the game, I will have the students pass around a small nerf ball, and I will set a timer for one minute. I will participate in the game as well. The person holding the nerf ball when the timer goes off will take their turn to share about their day and rate it by drawing a smiley face, a neutral face, or a frowny face on a white board. I will prompt students to practice active listening skills as people are sharing.

Activity Two
I will use the questions suggested by Schrumpf, Crawford, and Bodine (1997, p. 47) for evaluating fair options. The questions are slightly modified from the originals to accommodate the needs of the students and this lesson. I will use the term ideas instead of the term options and the term needs instead of the term interests in this lesson. Each question
will be written on an index card and placed in the middle of a table for the students to take turns drawing a card. As each student draws a card, they will read the question written on the card, and we will discuss the importance of each question. The questions are as follows:

- Is this idea (option) fair?
- Can you do it?
- Do you think it will work?
- Does the idea (option) address the needs of the people involved?
- What are the consequences of deciding to do the idea?

Next, I will review the brainstormed ideas generated in the chosen conflict in lesson eleven with the students. Students will be given the opportunity to try to think of more ideas. I will guide the students in using the five questions to determine which ideas they think are the best in problem solving the conflict.

**Activity Three**

I will instruct the students to display active listening skills as they volunteer to orally read three vignettes of conflicts and negotiation strategies involving forcing, avoiding, and problem solving. If no students want to volunteer to orally read the vignettes, I will read them. Next, I will tell the students to identify the following in the vignettes: the negotiation strategy being used, any communication pitfalls that might be happening, the basic needs, and the points-of-view of the characters. Finally, I will ask the students if they can think of any fair ideas about the ways the forcing and avoiding vignettes could have been problem solved.
Activity Four

The students may choose to play the memory game or put together a teacher made puzzle
with the problem solving steps and picture cues written on each piece.
Lesson Twelve

Goals

Continue to establish rapport with students.

The students will continue to develop an understanding of the three negotiation strategies: forcing, avoiding, and problem solving.

The students will continue to develop an understanding of the four basic needs.

The students will continue to practice active listening skills.

The student will continue to learn the six problem solving steps.

The students will experience closure during this final lesson.

Activity One

I modified this activity based upon “Hear Your Strengths” from Schrumpf, Crawford, and Bodine (1997, p. 283). The activity was modified to better accommodate the needs of the students. Positive statements about oneself will be written on small strips of paper and placed in a hat. The students will take turns drawing the statements out of the hat and reading them aloud. I will participate in the activity as well. The statements are as follows:

I am a nice person.

I am a smart person.

I am a good friend.

I have a good sense of humor.

I know how to be a good student.

I am friendly to others.

People enjoy my company.

I like myself.
I have learned how to be a good problem solver.

After the students read the statements, they may share about their day as they wish. I will instruct the students to display active listening skills during the sharing.

**Activity Two**

I will instruct the students to display active listening skills as they volunteer to orally read three vignettes of conflicts and negotiation strategies involving forcing, avoiding, and problem solving. If no students want to volunteer to orally read the vignettes, I will read them. Next, I will tell the students to identify the negotiation strategy being used in each of the vignettes as well as the basic needs and the points-of-view of the characters in the vignettes. Finally, I will ask the students if they can think of any fair ideas about the ways the forcing and avoiding vignettes could have been problem solved.

**Activity Three**

The students may choose to play the memory game or put together a teacher made puzzle with the problem solving steps and picture cues written on each piece.

**Activity Four**

I will use the activity “The Quality Line” from Schrumpf, Crawford, and Bodine (1997, p. 282). I will replace the term mediator with the term problem solver. In this activity, the students will sit at a table or in a circle on the floor. I will have the students pass around a “talking stick.” As each student gets the talking stick, he or she will give one reason he or she will be a good problem solver. I will participate in this activity, as well. If a student cannot think of a reason, I will suggest one for them. Next, I will have the students pass around the “talking stick” again, and have them share two things they have learned about problem solving negotiation.
APPENDIX E

Role Plays and Vignettes Used in Lessons
Role Play Script Lesson One

Step 1: Agree to Solve the Problem

Ned: I agree to solve the problem.
Jake: I agree to solve the problem.

Step 2: Share Points of View

Ned: Jake, you borrowed my new CD and loaned it to Charlie without my permission. Now Charlie won’t give it back to me. If I don’t get my CD back, I’m never gonna speak to you again!
Jake: Charlie told me he was just gonna borrow it during free time. I thought he would give it back; but now he says he wants to keep it to the end of the week. It’s not my fault!

Step 3: Say What I Need and Why

Ned: Jake, I need to get my CD back before the end of the week. It’s my favorite CD, and I want to listen to it while I do my homework.
Jake: Ned, I need time to speak once more with Charlie about getting your CD back. Today is Monday, and I won’t see Charlie again until Wednesday morning during P.E.

Step 4: Share Ideas to Solve the Problem

Ned: Would it be possible for you to call Charlie at home tonight?
Jake: I don’t have Charlie’s phone number, but I guess I could try to find it. Though, I’m not really friends with Charlie; so I’m not very comfortable with calling him at home. Maybe I could try to talk to him before classes start tomorrow. He probably goes by his locker before class, and I could try to talk to him at his locker.

Step 5: Ask Which Ideas Are Fair

Jake: Does talking to Charlie before school tomorrow sound fair to you, Ned; or do you still think I should try to call him at home?
Ned: I think it’s fair for you to talk to Charlie before school tomorrow. However, what if he won’t give my CD back to you?

Jake: If Charlie refuses to give it back, I will go talk to one of the counselors and see if they will help me get it back.
Ned: That sounds fair enough.
Role Play Script Lesson Three

Step 1: Agree to Solve the Problem

Candy: I agree to solve the problem.
Al: I agree to solve the problem.

Step 2: Share Points of View

Candy: Al, every time we play checkers you call me a cheater. I wasn’t cheating. That’s why I called you a stupid liar.
Al: I don’t like to lose. It makes me feel bad. I like to win. So I called you a cheater.

Candy: But I wasn’t cheating.
Al: Maybe not. But I didn’t like being called a stupid liar. It’s not nice to call me names.

Step 3: Say What You Need and Why

Candy: I need you to stop calling me a cheater when we play a game because it’s not true.
Al: I need you to stop calling me stupid because it makes me mad.

Step 4: Share Ideas to Solve the Problem

Candy: When you call me a cheater, I could ask you to stop without calling you a name back. Also, since you don’t like to lose, maybe we could color together for free time instead of playing a game.
Al: I could try to work on learning how to be a better sport when I’m losing. We could try coloring together during free time instead of playing a game, but I like checkers the best.

Step 5: Ask Which Ideas Are Fair

Candy: Al, do you think coloring together during free time might be a fair idea?
Al: Hmm. Yes; I think that would work. Though, maybe we could still play checkers some of the time if I promise not to call you a cheater anymore?

Step 6: Agree on a Fair Idea

Candy: Well, I think for now I’d rather color together during free time.
Al: O.K. I agree that coloring is the best idea for now.
Role Play Script Lesson Seven

Step 1: Agree to Solve the Problem

Candy: I agree to solve the problem.
Conor: I agree to solve the problem.

Step 2: Share points of view.

Conor: Candy, you borrowed $5.00 from me last week, and you were suppose to pay it back the next day and didn’t. I don’t like it when people borrow money from me and refuse to pay it back.
Candy: I forgot to pay it back last week, and now I don’t have the money.

Step Three: Say What You Need and Why

Conor: I need that money today so I can buy lunch.
Candy: I only have enough money to buy lunch for myself today.

Step Four: Think of Ideas and Share Them

Conor: Candy, I think you should give me the money you owe me so I can buy lunch, and go without lunch yourself.
Candy: Maybe I could borrow money from Ms. Smith to buy my lunch and go ahead and pay you back today.
Conor: Another idea would be that you could ask to charge your lunch, and go ahead and pay me back today.

Step Five: Ask Which Ideas Are Fair

Candy: I’m not sure it’s fair to borrow money from Ms. Smith. She might not loan it to me anyway.
Conor: Well, it’s not fair for me to go without lunch when you owe me money.
Candy: It’s not fair for me to go without lunch either.

Step Six: Agree on a Fair Idea

Candy: O.k. I will ask if I can charge my lunch.
Conor: Good. Also, I think in the future we should agree not to loan or borrow money from each other. Besides, it’s against the class rules.
Candy: I agree.
Lesson Two Vignettes

1. Andy and Doug were playing dominoes at the free time table. Andy thought Doug was giving himself too many points. Andy yelled, “Stop cheating, Doug!” and swept all of the dominoes off the table. “Now you have to give those points back!” shouted Andy. What negotiation strategy was Andy using?

2. Lynn and Todd were arguing over who would get a turn on the X-Box next. Lynn told Todd he was a baby if he didn’t let her go first. Todd said, “Forget it Lynn; I didn’t want to play anyway.” Todd went back to his desk. What negotiation strategy was Todd using?

3. Andy had asked his parents if he could go play with his friend, Lee, immediately after school. However, Andy’s parents told him that he had to finish his homework first. Andy explained to his parents that Lee was going out of town at 5:00 p.m. and would be gone all weekend; so if he didn’t play with Lee right after school, they wouldn’t be able to play. Andy explained to his parents that he didn’t have very much homework and asked them if he could do his homework right after he played with Lee. What negotiation strategy was Andy using?

Lesson Four Vignettes

1. Tarik and Conor both needed help from Ms. Smith in English. However, Ms. Smith was busy helping Anna. Both Tarik and Conor started making silly noises to try to get Ms. Smith’s attention. When Ms. Smith continued to help Anna, Conor threw his English book at Ms. Smith and yelled, “I want you to help me right now!” What negotiation strategy was Conor using?

2. Ned got upset with Ms. Smith because he always seemed to be the last one chosen to be room helper, lately. Ned explained to Ms. Smith that he felt bad since he hadn’t been a room helper in several weeks. Ms. Smith checked the room helper schedule and realized she had forgotten to type his name on this month’s list. She asked Ned if he thought it would be fair to assign him to be a room helper the following week. Ned agreed that would be fair. What negotiation strategy was Ned using?

3. Al, Dan, and Conor all wanted to play at the air hockey table in Ms. Tripp’s room during indoor recess. However, according to class rules, only two people could play air hockey at one time. All three boys got mad and refused to play with each other at all. What negotiation strategy were the boys using?
Lesson Six Vignettes

1. Ms. Little has given Dave ten math problems that he doesn’t understand. Dave starts to make a face at Ms. Little because he doesn’t understand the problems. However, Dave decides to tell Ms. Little that he doesn’t understand how to do the problems and needs some help to complete them. What kind of negotiation strategy is Dave using?

2. Anna is mad at Lynn for playing with Lisa, instead of her, during recess today; so Anna threatens to beat Lynn up if she won’t play with her tomorrow. What kind of negotiation strategy is Anna using?

3. Todd wanted to sit next to his new friend, Jake, during lunch. However, there was no room at Jake’s lunch table. Todd felt left-out and hurt, so he began ignoring Jake and decided not to be Jake’s friend after all. What kind of negotiation strategy is Jake using?

Lesson Seven Vignettes

1. Ron got mad at Danny for taking the last two chocolate milks in the lunch line, so Ron took both of the milks from Danny when he wasn’t looking and drank them. Ron laughed and made fun of Danny when Danny found-out his milks were gone. What negotiation strategy was Ron using?

2. Candy is working on a puzzle by herself. Tess wants to help Candy work on the puzzle, but Candy wants to finish the puzzle by herself. Candy and Tess both agree they will work on another puzzle together when Candy finishes the one she is doing by herself. What negotiation strategy are Candy and Tess using?

3. Cam is very tired and upset today because his parents were quarreling all night and their shouting kept him awake. Ms. Tripp gives him a long writing assignment as soon as class starts in the morning. Cam needs to talk to the school counselor and does not feel like working---especially on a long writing assignment. However, instead of asking to see the counselor puts his head down on his desk and pretends he doesn’t hear Ms. Tripp’s directions for the assignment. What negotiation strategy is Cam using?
Lesson Ten Vignettes

1. Kirk and Ted always play Tag at recess. However, today Ted wants to play Four Square, and Kirk still wants to play Tag. Ted and Kirk brainstorm different ideas and decide to play Four Square during morning recess and Tag during afternoon recess. What negotiation strategy are Kirk and Ted using?

2. Kirk wants to play with Jake’s hot wheels during free time, but Jake refuses to share. Kirk has shared his toys with Jake during free time before and thinks Jake is being unfair. Kirk secretly steals Jake’s hot wheels. What negotiation strategy is Kirk using?

3. Tess and Rhonda enjoy sitting together during lunch. Today, Rhonda asked the new girl, Julie, to sit with them. Tess doesn’t like Julie even though she doesn’t know her very well. Tess decided not to say anything to Rhonda about Julie and to start sitting with someone else during lunch. What negotiation strategy is Tess using?

Lesson Eleven Vignettes

1. John and his brother Kirk want to watch television together. John wants to watch Digimon, but Kirk wants to watch Scooby Doo. John is mad because he thinks Kirk always wants his way. John tells Kirk to watch whatever he wants and goes in his room and shuts the door. What negotiation strategy is John using?

2. Rhonda’s mother wants her to go to bed at her regular 9:00 p.m. bedtime. Rhonda almost rolls her eyes and makes a face at her mother. Instead, Rhonda decides to tell her mother that she wants to stay up until 10 p.m. to finish a project for art. Rhonda’s mother agrees the art project is important and lets her stay up until 10:00 p.m. What negotiation strategy is Rhonda using?

3. Jake is going around saying that Kirk is going with Rhonda. This is not true. Kirk and Rhonda are just friends. Kirk gets so mad at Jake after hearing the rumor he started, that Kirk shoves Jake against the wall during lunch and says, “You’d better quit making-up things about me and Rhonda or I’ll punch your lights out!” What negotiation strategy is Kirk using?
Lesson Twelve Vignettes

1. Rhonda is getting on Jake’s nerves because she giggles every time he makes a mistake during mental math. Jake makes a face at Rhonda and shouts, “I’m going to fight you if you keep it up!”
What negotiation strategy is Jake using?

2. Cam is upset with Todd and Jake for not sharing enough space at the big table during free time. Cam decides to sit in the corner and refuses to play with anybody during free time. When Ms. Tripp asks Cam what’s wrong, he pretends not hear her question.
What negotiation strategy is Cam using?

3. Cam is mad at Tess. She always takes his favorite legos to play with during free time and won’t share. Cam tells Tess he doesn’t think it is fair that she always plays with the legos and won’t share with him. Tess makes a face at Cam. Cam ignores the face and suggests to Tess they take turns with the legos, share them, or divide them in half since there is only 10 minutes left of free time.
What negotiation strategy is Cam using?
APPENDIX F

Treatment Fidelity Check Sheets
## Treatment Fidelity Checklist: Lesson Seven Group One

<table>
<thead>
<tr>
<th>Teacher Behavior and Instructional Content</th>
<th>Present</th>
<th>Not Present</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishment of Rapport</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive Behavior Reinforced (V.I. 5)</td>
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<tr>
<td>Basic Needs Taught</td>
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<tr>
<td>Active Listening Taught</td>
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<tr>
<td>Six Problem Solving Steps Taught</td>
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Score: _____

Directions: Put a check mark beneath Present or Not Present to show if teacher behavior and listed instructional content occurred or not. V.I. 5 means reinforcement delivered approximately every 5 minutes.

## Treatment Fidelity Checklist: Lesson Ten Group Two

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<td>Points-of-View Taught</td>
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Directions: Put a check mark beneath Present or Not Present to show if teacher behavior and listed instructional content occurred or not. V.I. 15 means reinforcement delivered approximately every 15 minutes.
APPENDIX G

Inter-rater Reliability Check Scores
Table G.1

Inter-rater Reliability Check Scores for Lang’s Class Behaviors

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<tr>
<th>Reliability Checks</th>
<th>PS Score</th>
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<th>PSw/CIP Score</th>
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Note: PS = Problem solving, PSwTP = Problem solving with teacher prompt, PSwCIP = Problem solving with crisis interventionist prompt, VA = Verbal aggression, PA = Physical aggression, and SD = Standard deviation.
Table G.2

Inter-rater Reliability Check Scores for Smit’s Class Behaviors

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<th>Reliability Checks</th>
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</table>

Note. PS = Problem solving, PSwTP = Problem solving with teacher prompt, PSwCIP = Problem solving with crisis interventionist prompt, VA = Verbal aggression, PA = Physical aggression, and SD = Standard deviation.
APPENDIX H

Problem Solving Negotiation Instruction Assessments: Including Student Recall Scoring Sheet and Attitude Assessments Questions
Acquisition Check: Application Part I

You and John have agreed to work on a science project together in Ms. Theordore’s classroom. Jon is very interested in volcanoes and wants to make a model of a volcano for the project. You are very interested in animals and want to create a book of mammals. Both you and Jon have argued for several minutes about which project to complete.

Using problem solving, what should you first agree to do with Jon?

What is Jon’s point of view?

What is your point of view?

Which basic need(s) are you and Jon trying to meet?

What could you tell Jon about your needs?

What are some ideas that might resolve the conflict?

Which ideas do you think are fair?

Which idea do you think you could agree to use?

Student Name: Date:
**Maintenance Probe 1: Application Part 1**

Jake wants to have recess outside. However, it is too cold so Ms. Langley has told the class they must have recess inside and everyone must either play with a puzzle or play with legos. Jake doesn’t like legos and gets angry at Ms. Langley.

Using problem solving, what should Jake first agree to do with Ms. Langley?

What is Jake’s point of view?

What is Ms. Langley’s point of view?

Which need(s) are Jake and Ms. Langley trying to meet?

What could Jake tell Ms. Langley about his needs?

What are some ideas that might resolve the conflict?

Which ideas do you think are fair?

Which idea do you think you could agree to use?
Maintenance Probe 2: Application Part 1

Ms. Greene is giving your class a writing assignment. The assignment is to write a book report about a famous person and present it to class. Ms. Greene is requiring everyone to draw a picture that will illustrate their book report. You aren’t very good at drawing, and you ask Ms. Greene if you can leave the picture out of your book report because you will be embarrassed if you have to show it to the class. You are worried your classmates will laugh at your picture. Ms. Greene tells you that you must include a picture of some sort. You feel like Ms. Greene is being unfair. What should you do?

Using problem solving, what should you first agree to do with Ms. Greene?

What is Ms. Greene’s point of view?

What is your point of view?

Which basic need(s) are you and Ms. Greene trying to meet?

What could you tell Ms. Greene about your needs?

What are some ideas that might resolve the conflict?

Which ideas do you think are fair?

Which idea do you think you could agree to use?

Student Name:                    Date:
Everyday this week during free time, Daniel immediately has gotten the new Dragonball Z puzzle to put together. Daniel always gets free time before you because you meet with the speech teacher, and she brings you back to class five minutes after free time has begun. Dragonball Z is your favorite cartoon, and you would like a chance to put the puzzle together. Yesterday, you asked Daniel if he would stop working on the puzzle and let you finish putting it together. Daniel refused to let you have the puzzle and told you that he had the right to finish putting together his favorite puzzle during free time. Today, Daniel has the puzzle again. You think Daniel is being selfish by always getting the new puzzle as his free time pick.

Using problem solving, what should you first agree to do with Daniel?

What is Daniel’s point of view?

What is your point of view?

Which basic need(s) are you and Daniel trying to meet?

What could you tell Daniel about your needs?

What are some ideas that might resolve the conflict?

Which ideas do you think are fair?

Which idea do you think you could agree to use?

Student Name:                    Date:
Acquisition Check: Application Part II

Andrea and Rose always play together on the monkey bars during recess. However, yesterday Rose decided she wanted to play with Cleo on the swings. Andrea got jealous and felt ignored by Rose, so she made-up a mean rumor about her.

1. Is Andrea using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Andrea trying to meet? Belonging, power, freedom, or fun?

Lane and Troy were math partners earlier today. Troy had a hard time understanding the story problems and didn’t seem to be trying to work very hard. Lane is very good in math and became impatient. Lane told Troy he wasn’t going to be his partner anymore and moved to another desk to work alone.

1. Is Lane using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Lane trying to meet? Belonging, power, freedom, or fun?

Teri and Judy were making a collage together. Judy found several pictures she liked a lot and pasted them over Teri’s pictures. Teri felt very disappointed that her picture were covered-up and got angry at Judy. Teri told Judy she didn’t think it was fair that she pasted over her picture because the collage belonged to both of them. Judy explained that she didn’t mean to be unfair but liked all of the pictures she had found. Judy admitted she shouldn’t have pasted over Teri’s pictures. Judy offered to try to remove some of her pictures. However, Teri thought removing the picture would tear the collage. Teri suggested they start a new collage. Judy agreed starting a new collage would be a good idea.

1. Are Teri and Judy using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Teri and Judy trying to meet? Belonging, power, freedom, or fun?

Vance and Jacob were eating lunch together. Vance accidentally spilled fruit punch on Jacob’s new And-1 shirt. Jacob yelled at Vance that he should watch what he’s doing and deliberately dumped chocolate milk all over Vance’s lap.

1. Is Jacob using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Jacob trying to meet? Belonging, power, freedom, or fun?

We learned a lot about active listening. Can you tell me some ways that you show that you are actively listening during a conflict?

We also learned a lot about conflict. What is a conflict?

Student Name: Date:
**Maintenance Probe 1: Application Part II**

You and Jamal were playing the board game, “Life,” and eating popcorn during a sleep over at Jamal’s house. When the game was over, Jamal’s mother asked you both to pick-up the game, put it away, and vacuum the popcorn off the floor. Since Jamal had started throwing popcorn at you during the game, you thought he should be the one to vacuum. However, Jamal thought you should be the one to vacuum, since you were his guest. Besides, according to Jamal, you had thrown popcorn back at him. You both got into an argument over who should vacuum. Finally, you agreed to vacuum but went home afterwards and told Jamal that you didn’t want to spend the night since he wasn’t being fair.

1. Are you using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are you and Jamal trying to meet? Belonging, power, freedom, or fun?

Drake Baker was walking down the hall when he dropped his Green Bay Packers pencil. Earlier in the week, Drake had borrowed a Green Bay Packers pencil from Alan and lost it. Today, Alan was walking behind Drake when Drake dropped his own Green Bay pencil. Alan snatched the pencil off the floor, refused to give it back to Drake until he returned his Green Bay pencil, and started making fun of Drake’s name by singing, “Bake me a cake Baker!” Drake lost his temper and shoved Alan against the wall. Drake bent Alan’s hand back until Alan agreed to give him the pencil.

1. Is Drake using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Drake and Alan trying to meet? Belonging, power, freedom, or fun?

Your mother asked you to put away your baseball, bat, and skateboard that you had left out in the yard earlier in the afternoon. You thought you had put them all away, but you forgot your skateboard. Your mother brought it in for you but said that you would not be allowed to use your skateboard for a week, since you did not put it away when she asked. You thought about yelling at your mother and calling her a name. However, you controlled your temper and explained to your mother that you had meant to put the skateboard away but had forgotten it. Your mother listened and accepted that you had forgotten to put the skateboard away but said that you needed to learn to be more responsible in the future. Your mother said you still could not use the skateboard for a week. You suggested to your mother that you help put away the dishes every night for a week instead of not being allowed to use your skateboard. Your mother agreed that would be a fair idea.

1. Are you using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) are you and your mother trying to meet? Belonging, power, freedom, or fun?

Liliana and Doris were having fun making jokes about each other while their teacher, Mr. Stiles, was out of the room. However, when Doris started making jokes about Liliana’s
“frizzy frizzball” hair, Liliana didn’t think it was funny. Liliana put her head down on her desk and refused to talk to Doris anymore. When Mr. Stile returned to the room, Liliana kept her head on her desk and refused to talk to him either.

1. Is Liliana using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Liliana trying to get met? Belonging, power, freedom, or fun?

Do you remember some ways that you actively listen during a conflict?

Do you remember the definition of conflict?
Julie is interested in being an officer in her Girl Scout Troupe. Rhonda is in Julie’s Girl Scout Troupe and doesn’t like Julie because Julie never talks to her. Rhonda thinks Julie is “stuck up” and unfriendly. Rhonda steals Julie’s Girl Scout Manual, so Julie won’t be able to study for the test the girls must pass to be an officer.

1. Is Rhonda using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Rhonda trying to meet? Belonging, power, freedom, or fun?

Devin and Susan are best friends. They are both in sixth grade and have been best friends since first grade. However, recently Devin’s friends, Bob and Joe, have begun teasing him about spending so much time with Susan and saying that Susan must be his girlfriend. Devin explains to Bob and Joe that Susan is his friend, not his girlfriend and that he needs them to stop calling Susan his girlfriend because it isn’t true. Bob and Joe tell Devin that they wish he would make time to play basketball with them and some other boys after school, instead of skating every afternoon with Susan. Devin has a reputation of being the best basketball player in the sixth grade. Devin agree to play basketball after school but tells Bob and Joe that the teasing has to stop and that Susan may come watch some of the games. Bob and Joe agree to Devin’s idea.

1. Is Devin using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Devin trying to meet? Belonging, power, freedom, or fun?

Marci’s parents told her that she could invite one friend to go on a vacation with them to the lake. Marci couldn’t decide whether to invite Jill or Fran. Marci asked her parent if she could invite both Jill and Fran. Marci’s parent told her that she could only invite one friend. Marci told her parents that if she couldn’t invite both friends, she would make their vacation miserable.

1. Is Marci using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Marci trying to meet? Belonging, power, freedom, or fun?

Afton was tired of sitting at the second table in the lunchroom because she felt like nobody at the table would talk to her. Afton started saying she was sick during the lunch and going to the nurse’s office. When the nurse asked Afton why she always seemed sick during lunch, Afton ignored the nurse’s question.

1. Is Afton using the negotiation of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Afton trying to meet? Belonging, power, freedom, or fun?
Do you remember some ways you show that you are actively listening during a conflict?

Do you remember the definition of conflict?
Maintenance Probe 3: Application Part II

You just got a new Hawaiian shirt and have been very excited about wearing it to school today. You see your friend, Andy, in the hallway, and he starts to make fun of your new shirt calling you a “hula girl.” Some of your friends hear Andy call you a “hula girl” and start to laugh. You feel embarrassed and yell at Andy that at least you don’t buy your clothes from Goodwill.

1. Are you using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are you trying to meet? Belonging, power, freedom, or fun?

Leslie sits beside you during math group in Mr. Knapp’s class. For some reason, Leslie always gets Mr. Knapp’s attention before you and gets more help during math. You feel that Mr. Knapp helps Leslie more than he helps you. You don’t say anything to Leslie or to Mr. Knapp, but after school you go ask Ms. Vines if you can switch to her math class. Ms. Vines has always been nice to you.

1. Are you using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are you trying to meet? Belonging, power, freedom, or fun?

Tonya got 25 points from Ms. Gregory for helping organize the science shelf during recess today. You are upset because you helped organize the social studies shelf last week during recess, and Ms. Gregory didn’t give you any points at all. You decide to tell Ms. Gregory that you don’t think it’s fair that Tonya got 25 bonus points, and you didn’t get any points. Ms. Gregory explains that she doesn’t remember you helping organize the social studies shelf. You remind Ms. Gregory that you did help organize the social studies shelf and ask her to check the room helper sign-up sheet to see that you are telling the truth. Ms. Gregory checks the sign-up sheet and finds your name; she agrees to give both you and Tonya 25 extra points.

1. Is Tonya using the negotiation strategy of forcing, avoiding, or problem solving?
2. Which basic need(s) is/are Tonya trying to meet? Belonging, power, freedom, or fun?

Michael and Vaughn were playing “Carmen Sandiego” on the computer. Michael had to go to music and wanted to stop the game until he got back. Vaughn wanted to keep playing by himself because he knew he would have to go to art when Michael got back from music. The two boys argued for a few minutes about what to do. Finally, Michael got tired of arguing and deleted the entire game.
1. Is Michael using the negotiation strategy of forcing, avoiding, or problem solving?

2. Which basic need(s) is/are Michael trying to meet? Belonging, power, freedom, or fun?

Do you remember some ways you show that you are actively listening during a conflict?

Do you remember the definition of conflict?
### Scoring Sheet for Student Recall of Problem Solving Negotiation Steps

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Student Name:  

Date:  

Comments:
Problem Solving Negotiation Training: Student Attitude Assessment One Questions

1. I liked learning how to negotiate by using problem solving.
2. I feel as though I have learned a lot about negotiation.
3. I think I will use problem solving in school.
4. I think I will use problem solving at home.
5. The thing I liked best about learning how to negotiate was:
6. The thing I liked least about learning how to negotiate was:

Problem Solving Negotiation Training: Student Attitude Assessment Two Questions

1. I feel as though I have used problem solving more at school.
2. I feel as though I have used problem solving more at home.
3. I think learning how to negotiate has helped my behavior at school.
4. I think learning how to negotiate has helped my behavior at home.
5. I am glad that I learned to negotiate using problem solving.
6. Are there any other comments you would like to make about learning how to negotiate using problem solving?

Problem Solving Negotiation Training: Teacher Attitude Assessment Questions

1. I think the problem solving negotiation training helped decrease students’ use of negative conflict resolution skills in the classroom.
2. I think the problem solving negotiation training helped improve my own understanding of how to help my students use positive conflict resolution in the classroom.
3. I do not think the problem solving negotiation training was helpful for me or my students.
4. I think the problem solving negotiation lessons helped improve my students’ use of positive conflict resolution skills in the classroom.
5. I would like to learn more about problem solving negotiation strategies and conflict resolution in the future.

6. Would you like to share any additional comments?
APPENDIX I

General Guidelines for Scoring Applications Sections of Acquisition Checks and Maintenance Probes
General Guidelines for Scoring Application Part I: Acquisition Checks and Maintenance Probes

1. The first question is correct if the answer is: “Agree to solve the problem.”

2. Questions two and three address point of view. Score them each as correct if the points of view of both parties are reasonably described.

3. Questions four and five ask about the four basic needs. Score them as correct if the basic needs listed accurately describe the needs of the parties in the vignette.

4. Question six asks the student to think of some ideas that might resolve the conflict. Score the answer as correct if at least two ideas are recorded.

5. Question seven asks which ideas generated are fair. Score the answer correct if at least one idea is recorded that sounds reasonably fair.

6. Question eight asks which idea could be agreed upon to use. Score the answer correct if at least one fair idea is recorded.
General Guidelines for Scoring Application Part II: Acquisition Checks and Maintenance Probes

1. The first question for each of the four vignettes asks for identification of the correct negotiation strategy being used. Score the answer as correct if the recorded answer matches the operational definition of the negotiation strategy answered in the vignette.

2. The second question for each of the four vignettes asks the student to correctly identify the basic need(s) of the party or parties in the vignette. Score the answer as correct if the basic need(s) listed might accurately apply to party or parties in the vignette.

3. The question about active listening is scored correct if at least two characteristics of active listening are recorded.

4. The question about the definition of conflict is scored correct if the response states any of the following: a fight, a disagreement, an argument, when people don’t get along.
APPENDIX J

Individual Student Graphs
Figure J.1. Cain’s Problem Solving Occurrences

Figure J.2. Cain’s Problem Solving with Teacher Prompt Occurrences.
Figure J.3. Cain’s Problem Solving with Crisis Intervention Prompt Occurrences.

Figure J.4. Cain’s Avoiding Occurrences.
Figure J.5. Cain’s Forcing Occurrences.

Figure J.6. Cain’s Office Occurrences.
Figure J.7. Cain’s Verbal Aggression Occurrences.

Figure J.8. Cain’s Physical Aggression Occurrences.
Figure J.9. Judd’s Problem Solving Occurrences.

![Graph showing Problem Solving Occurrences over time with baseline, treatment, and post periods](image)

Figure J.10. Judd’s Problem Solving with Teacher Prompt Occurrences.

![Graph showing Problem Solving with Teacher Prompt Occurrences over time with baseline, treatment, and post periods](image)
Figure J.11. Judd’s Problem Solving with Crisis Interventionist Prompt Occurrences.

Figure J.12. Judd’s Avoiding Occurrences.
Figure J.13. Judd’s Forcing Occurrences.

Figure J.14. Judd’s Office Occurrences.
Figure J.15. Judd’s Verbal Aggression Occurrences.

Figure J.16. Judd’s Physical Aggression Occurrences.
Figure J.17. Rose’s Problem Solving Occurrences.

Figure J.18. Rose’s Problem Solving with Teacher Prompt Occurrences.
Figure J.19. Rose’s Problem Solving with CI Prompt Occurrences.

Figure J.20. Rose’s Avoiding Occurrences.
Figure J.21. Rose’s Forcing Occurrences.

Figure J.22. Rose’s Office Occurrences.
Figure J.23. Rose’s Verbal Aggression Occurrences.

Figure J.24. Rose’s Physical Aggression Occurrences.
Figure J.25. Alan’s Problem Solving Occurrences.

Figure J.26. Alan’s Problem Solving with Teacher Prompt Occurrences.
Figure J.27. Alan’s Problem Solving with Crisis Interventionist Prompt Occurrences.

Figure J.28. Alan’s Avoiding Occurrences.
Figure J.29. Alan’s Forcing Occurrences.

Figure J.30. Alan’s Office Occurrences.
Figure J.31. Alan’s Verbal Aggression Occurrences.

Figure J.32. Alan’s Physical Aggression Occurrences.
Figure J.33. Norm’s Problem Solving Occurrences.

Figure J.34. Norm’s Problem Solving with Teacher Prompt Occurrences.
Figure J.35. Norm’s Problem Solving with Crisis Interventionist Prompt Occurrences.

Figure J.36. Norm’s Avoiding Occurrences.
Figure J.37. Norm’s Forcing Occurrences.

Figure J.38. Norm’s Office Occurrences.
Figure J.39. Norm’s Verbal Aggression Occurrences.

Figure J.40. Norm’s Physical Aggression Occurrences.
Figure J.41. Tim’s Problem Solving Occurrences.

Figure J.42. Tim’s Problem Solving with Teacher Prompt Occurrences.
Figure J.43. Tim’s Problem Solving with Crisis Interventionist Prompt Occurrences.

Figure J.44. Tim’s Avoiding Occurrences.
Figure J.45. Tim’s Forcing Occurrences.

![Forcing Occurrences Graph](image)

Figure J.46. Tim’s Office Occurrences.

![Office Occurrences Graph](image)
Figure J.47. Tim’s Verbal Aggression Occurrences.

Figure J.48. Tim’s Physical Aggression Occurrences.
REFERENCES


Bullock, C., & Foegen, A. (2002). Constructive conflict resolution for student with 


determination interventions for students with and at risk for emotional and behavioral 
 disorders: Mapping the knowledge base. *Behavioral Disorders, 36*, 100-116.


and school-wide discipline in general education. *Education and Treatment of 
Children, 16*, 361-381.

Schoolwide conflict resolution and peer mediation programs: Experiences in three 
middle schools. *Intervention in School and Clinic, 36*, 94-100.

Delaney, K. R. (2009). Reducing reactive aggression by lowering coping demands and 
boosting regulation: Five key staff behaviors. *Journal of Child and Adolescent 


