THE EFFECT OF REFLECTIVE ABSTRACTION VERSUS PEER-FOCUSED DISCUSSIONS ON THE PROMOTION OF MORAL DEVELOPMENT AND PROSOCIAL BEHAVIOR: AN INTERVENTION STUDY

by

John Tyler Binfet

B.A., The University of Calgary, 1987
B.Ed., The University of British Columbia, 1991
M.A., The University of British Columbia, 1994

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Department of **EDUCATIONAL AND COUNSELLING PSYCHOLOGY AND SPECIAL EDUCATION**

The University of British Columbia
Vancouver, Canada

Date 09-02-06
ABSTRACT

According to cognitive-developmental theorists, cognitive conflict is the mechanism responsible for both cognitive and moral growth. Cognitive conflict may be generated through two distinct pathways: interindividually, in which individuals interact with each other thus exposing one another to a variety of views and opinions; and intraindividually, or what Piaget termed reflective abstraction, a process in which an individual engages in a form of solitary mental reflection in response to information or stimuli that contrast or conflict with the information the individual currently possesses.

The goals of this study were twofold. The first goal was to examine the effects of two distinct moral reasoning interventions on moral reasoning development: an interindividual or social intervention in which students participated in moral dilemma discussions and an intraindividual or individual intervention in which students participated in reflective abstraction concerning the issues prevalent within a series of moral dilemmas. The second goal of this study was to examine the effects of the aforementioned moral reasoning interventions on self-, peer-, and teacher-ratings of prosocial and antisocial behaviors. Ninety-seven sixth and seventh grade students attending public school in a large, metropolitan Western Canadian city participated in the study. Participants were randomly assigned to one of four groups: a moral discussion group, a placebo discussion group, a moral reflection group, and a placebo reflection group. The interventions occurred over a ten-week period involving one 40-minute period per week. Gibbs' Social Moral Reflection Measure - Short Form (Gibbs, Basinger, & Fuller, 1992) was used to assess pre- and post- levels of moral reasoning. Additionally, pre-and posttest measures of self-, peer-, and teacher-ratings of behavior were administered.

The results indicated that a) there was no difference in moral reasoning between students in the two experimental groups, b) students in both experimental groups made significant gains in
moral reasoning when compared to students in their respective placebo groups, and c) although no difference was found in self-ratings of prosocial and antisocial behavior, several differences were found across groups with respect to peer- and teacher-ratings of prosocial and antisocial behavior.

The findings from this study contribute both theoretically and practically to the field of moral education. From a theoretical perspective, the results of this study challenge conventional thinking concerning the different means through which moral reasoning may be facilitated. Certainly, the findings validate the role that reflective abstraction plays in fostering moral development. From a practical perspective, the findings provide strategies for educators interested in promoting both moral development and prosocial behavior in the classroom.
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INTRODUCTION

It was the work of Lawrence Kohlberg (1976, 1980, 1985) that initially established a bridge between moral reasoning theory and educational practice. Building upon the theoretical work of Dewey (1966) and Piaget (1932/1965), Kohlberg (1970, 1980, 1985) successfully applied a stage model theory of moral reasoning to the classroom and school setting. This opened the door to a new field of empirical investigation - the cognitive-developmental approach to moral education.

Kohlberg, in collaboration with his student and colleague Moshe Blatt (1969), proposed that moral development could be facilitated in educational settings (Kohlberg, 1980, 1985). To test their ideas, they developed a moral development intervention they termed the Moral Discussion Group (MDG) which consisted of first having individuals discuss a series of moral dilemmas with their peers and then assessing their pre- to posttest gains in moral reasoning. Research has demonstrated that the MDG intervention has been successful in promoting the moral reasoning of individuals across a variety of settings (Arbuthnot & Gordon, 1986; Blatt & Kohlberg, 1975; Kruger, 1992; Rest, 1979; Taylor, 1995). Nevertheless, although a number of studies exist examining the effectiveness of the MDG in promoting moral reasoning, little research has been conducted investigating alternative moral development intervention approaches.

To date, moral reasoning interventions have relied heavily upon peer interactions as a means of generating cognitive conflict, the mechanism thought to be responsible for growth in moral and cognitive reasoning (Blatt & Kohlberg, 1975; Kohlberg, 1976; Piaget, 1932/1965). Although Kohlberg's theory relies largely on stimulating cognitive conflict via peer interactions, there remains an alternate, less extensively investigated means through which cognitive conflict may be facilitated. Cognitive conflict may, also, be facilitated through a process Piaget (1977)
coined "reflective abstraction." Reflective abstraction is akin to mental reflection and refers to the processes that occur when individuals reflect on their own actions (Furth, 1981).

Although the MDG has been extensively used as part of moral education interventions employed both in research (see Schlaefli, Rest, & Thoma, 1985 for a review) and practice (e.g., Berkowitz, Broughton, & Gibbs, 1980; Berndt, McCartney, Caparulo, & Moore, 1984; Lickona, 1991), it has proven effective in promoting changes in moral reasoning only about 50% of the time (Schlaefli, Rest, & Thoma, 1985). Therefore, it behooves researchers and practitioners to more fully examine the effectiveness of alternative approaches to facilitating moral development. Specifically, are there equally or more effective ways through which moral development may be promoted?

The primary purpose of the proposed investigation was to more explicitly understand the manner in which moral development occurs by examining the efficacy of two different moral reasoning interventions - one that involved the traditional discussion of moral dilemmas via peer interactions (i.e., the MDG) and one that provided individuals with the opportunity to individually reflect on moral dilemmas. The secondary purpose of this study was to examine the effects of each of the respective moral reasoning interventions on the promotion of different dimensions of salient social behavior in the classroom. That is, the effectiveness of the MDG intervention versus the individual reflective abstraction intervention in promoting increases in prosocial behavior and decreases in antisocial behavior of students was examined.

Because the theories of both Piaget and Kohlberg provide the framework for this study, I will begin by first outlining Piaget's theory of moral development followed by Piaget's theory regarding the mechanisms that underlie cognitive and moral development. Next, I will provide a review of Kohlberg's theory of moral development followed by a review of the measures used to assess moral reasoning. Following this, an overview of the empirical findings supporting both the
facilitation of moral reasoning via interindividual and intraindividual conflict is presented. A review of the relevant moral reasoning literature in each of these areas is included as part of the literature review. The review of the literature also includes a review of findings supporting the link between moral reasoning and classroom behavior. Last, the literature review concludes with a statement of the hypotheses for the study.

Theoretical Background to Moral Development

Piaget's Theory of Moral Development

It was the work of Jean Piaget that initially shed light on the development of moral reasoning in children. Although his work principally focused upon the cognitive development of the child, Piaget also proposed a theory of childhood moral development in his 1932 book entitled "The Moral Judgment of the Child." Piaget's (Piaget & Inhelder, 1958) theory of cognitive development, and his explication of the role cognitive conflict plays in promoting development, lays the foundation for an overview and examination of his theory of moral development. Piaget postulated that the moral reasoning of the child was characterized by two stages or phases (Gibbs, 1995; Piaget, 1932/1965). The first stage, heteronomous morality, sees the child placing great emphasis on the objective qualities of acts and on morality as being dictated from adult to child by adult (omnipotent) authority figures. This first stage proposed by Piaget is characteristic of children aged four to eight. The second stage of moral development refers to an autonomous sense of morality. At this stage, the child places less emphasis on obedience to authority figures and begins to evaluate for him/herself a sense of justice. It is at this stage that the child is able to take intentions into account. The autonomous sense of morality appears at age eight and extends through to age 12. In essence, the two stages depict a transformation from a very external morality (i.e., morality as imposed by adults) to a more internal morality, where the child him/herself defines what is right or wrong.
According to Piaget, adults who reinforce children via a system of rewards and punishments encourage and foster heteronomous morality, whereas adults who encourage the exchanging of views and discussion encourage autonomous morality (Piaget 1932/1965). The key for children in acquiring moral values is not in the indoctrination of values by adult figures but rather in the construction of the child’s own proper value system. This construction of a value system, according to Piaget, is best facilitated through interactions with others, notably peers (Piaget, 1932/1965). Piaget held that during peer interactions children are afforded the opportunity to independently negotiate their viewpoints. That is, to have their own views challenged, to experience cognitive conflict, and to integrate new perspectives into their existing schemas (Kruger, 1992). Moral dilemma discussions provide children opportunities for social interaction which in turn affords children opportunities to experience disequilibrium. This disequilibrium leads to the construction of new information and knowledge and, thus, development in moral reasoning.

Factors Underlying Cognitive and Moral Development

Piaget’s work in cognitive developmental psychology laid the foundation for his contributions to moral development with one major deviation. Specifically, whereas in his cognitive developmental theory he posited that development primarily occurred within contexts in which the individual interacts with his/her physical environment, in his theory of moral development Piaget contended that development occurred within contexts in which the individual interacts with his or her peers (Piaget, 1932/1965).

Certainly, one unique contribution of Piaget (1985) was his delineation of a mechanism for development. Piaget posited that individuals construct new knowledge when they experience disequilibrium, a form of cognitive dissonance. Disequilibrium, according to Piaget (e.g., Piaget & Inhelder, 1958), occurs when the individual is confronted with information that is incongruent
or inconsistent with his or her currently possessed information. This state of conflict or
disequilibrium is thought to arise from a mismatch of information between the individual and his
or her environment or from conflict generated within the individual's own activities (Chapman &
McBride, 1992). According to Piaget, the individual is motivated to make sense of his or her
environment and therefore seeks to reestablish a state of equilibrium. This adaptation to
environmental stimuli is achieved through the complementary processes of assimilation and
accommodation (Piaget, 1968). Assimilation is the process by which the individual deals with
environmental stimuli (e.g., new information) within the framework of his or her current cognitive
structures, whereas accommodation is the process describing the changes the individual makes to
adjust to the demands made by this new information (Ginsburg & Opper, 1979). Equilibration
thus coordinates the individual's existing cognitive structures with new information the individual
experiences. It is perhaps Hans Furth (1981) who most eloquently captured the essence of
equilibration in his writings on Piagetian developmental theory.

The states of intellectual development thus represent a constant progression
from a less to a more complete equilibrium and manifest therein the organism's
steady tendency toward a dynamic integration. This equilibrium is not a static
state, but an active system of compensations - not a final conclusion, but a new
starting point to higher forms of mental development. (p. 33)

Piaget (1963, 1971) held that the operations mediating cognitive functioning and growth
were the same whether the cognitive conflict was generated via social interactions or via mental
reflection. That is, according to Piaget, the individual applies the same principles of equilibration
in addressing his or her cognitive conflict regardless of how that conflict is generated. Piaget,
however, appeared to have placed emphasis on mental reflection as a source of cognitive conflict,
oft-times being criticized for neglecting the social factors contributing to development (DeVries,
Piaget’s conception of development occurred in a social vacuum. In defense of Piaget, Lourenco and Machado (1996), in their review of Piaget’s contribution to developmental psychology, argued that Piaget recognized the importance of both individual and social factors in development. Lourenco and Machado posited that Piaget did, in fact, recognize the importance of social factors, arguing that Piaget believed that social factors, while not sufficient on their own, did indeed play a critical role in helping the individual organize his or her cognitive operations.

Nevertheless, in order to better understand the role that social factors play in promoting development, one must first understand the mechanisms that facilitate development within the individual. One such mechanism is reflective abstraction. In his comprehensive review of Piaget’s theoretical contributions, Furth (1981) describes Piaget’s notion of reflective abstraction as:

an internal feedback that progressively enriches the internal structure. The organism reflects on its own coordinating activity, not in an introspective, self-reflective sense, but in a self-regulatory and self-expanding sense. The abstraction, as a feedback, is an internal regulatory mechanism; and as an internal enrichment, it becomes the principal source of growth of the operative structure. (p. 65)

Piaget uses the following example, which describes a young boy of 4 or 5, to illustrate the process of reflective abstraction:

He was seated on the ground in his garden and he was counting pebbles. Now to count these pebbles he put them in a row and he counted them one, two, three up to ten. Then he finished counting them and started to count them in the other direction. He began by the end and once again found he had 10. He found this marvelous. . . . So he put them in a circle and counted
Indeed, reflective abstraction, the process whereby the individual mentally reflects on his or her interactions with environmental stimuli (Ginsburg & Opper, 1979) became a cornerstone of Piaget’s developmental theory later in his career (Lourenco & Machado, 1996). Piaget held that it was through reflective abstraction that cognitive conflict could occur. This conflict would, in turn, facilitate cognitive development.

Smedslund (1966), using Piaget’s notion of cognitive conflict as a starting point, postulated that cognitive conflict could in fact be differentiated into two distinct types: cognitive conflict generated when a child’s experience contradicts his or her own expectations and cognitive conflict generated when a child communicates with others who share dissimilar perspectives. Smedslund argued that cognitive conflict generated by a contradiction of expectations resulted in the child altering his or her expectations whereas cognitive conflict stemming from social interaction fostered a reevaluation of the child’s viewpoint. Smedslund posited that only the second type of conflict, socially derived conflict, encouraged the child away from egocentrism and toward intellectual decentration. The work of Smedslund and others (Doise & Mugny, 1984; Perret-Clermont, 1980) highlights the importance of, as well as the need to better understand, the role that social interactions play in fostering cognitive conflict and subsequent development.

Although Smedslund examined cognitive conflict within a cognitive-developmental framework and not within the context of moral development, his work nevertheless serves as a foundation for examining cognitive conflict and the role it plays in facilitating moral development.

As a means of better understanding the mechanisms facilitating cognitive conflict, researchers began to distinguish between socio-cognitive conflict, or conflict that is generated via interindividual interactions, and cognitive conflict that is restricted to the individual him or herself, called intraindividual conflict (Dimant & Bearison, 1991). Although it has been
established that peers play an important role in facilitating interindividual conflict within social contexts, it has not yet been established that interindividual conflict is the sole means of facilitating moral development (Chapman & McBride, 1992). As argued by Piaget (1985) with the case of reflective abstraction, intrapsychic conflict, or conflict that is intrindividually generated, has also been found to foster growth. Given the established role that intraindividual conflict plays in promoting cognitive development, the question remains as to whether or not intraindividual conflict can facilitate growth within the context of moral dilemma reflection. Thus, it certainly behooves researchers interested in creating optimal conditions for moral growth to explore the efficacy of intraindividual versus interindividual conflict in stimulating moral development.

Kohlberg's Theory of Moral Development

The work of Piaget was instrumental in inspiring the work of Lawrence Kohlberg, whose six-stage model of moral reasoning significantly influenced the work of researchers and practitioners alike. Without a doubt, the work of Kohlberg (1958, 1969, 1984), most notably his identification of a six-stage developmental model of moral reasoning, has been highly influential within the realm of moral development and education research. His contribution to the understanding of moral reasoning has not only shed light on an important area of human development but has laid a foundation upon which much of the research investigating moral development has been possible. This is due in large part to his development of the Moral Judgment Interview (MJI), an instrument that measures moral reasoning (Colby & Kohlberg, 1987).\(^1\) His cognitive-developmental theory of moral reasoning aims to explain how an individual's sense of justice, of what is right and wrong, develops over time.

\(^1\) This measure is discussed in detail in the following section.
Building upon the work of Dewey (1966) and Piaget (1932/1965), Kohlberg (1958) both refined and validated a stage theory of moral reasoning development. Kohlberg proposed a six-stage model of moral reasoning. The six stages are categorized into three levels of development: the pre-conventional (preschool to middle school years); the conventional (adolescence to early adulthood); and the post-conventional (adulthood) (Colby, Kohlberg, Gibbs, & Libberman, 1983). The pre-conventional level is composed of stages one and two and focuses upon the avoidance of punishment and the satisfaction of one's needs. The conventional level is composed of stages three and four and centers upon one behaving so as to gain the approval of others and ensuring that one's behavior meets the expectations of others (e.g., family, nation).

The post-conventional level, which is comprised of stages five and six, focuses upon obeying the legal standards as set by the society as a whole and exercising one's conscience as guided by universal principles of justice. An overview of Kohlberg's stage-model theory of moral development is found in Table 1.
Table 1

Six Stages of Moral Development

<table>
<thead>
<tr>
<th>Level and Stage</th>
<th>Content of Stage “What is right”</th>
<th>Reasons for doing right</th>
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| **Level 1: Preconventional:**  
  Stage 1. Heteronomous morality | To avoid breaking rules backed by punishment, obedience for its own sake, and avoiding physical damage to persons and property | Avoidance of punishment and superior power of authorities. |
| Stage 2. Individualism, instrumental purpose, and exchange | Following rules only when it is to someone’s immediate interests and needs and letting others do the same. Right is also what’s fair, what’s an equal exchange, a deal, an agreement. | To serve one’s own needs or interests in a world where you have to recognize that other people have their interests too. |
| **Level 2: Conventional:**  
  Stage 3. Mutual interpersonal expectations, relationships, and interpersonal conformity | Living up to what is expected by people close to you or what people generally expect of people in your role as son, brother, friend, etc. “Being good” is important and means having good motives, showing concern about others. It also means keeping, mutual relationships, such as trust, loyalty, respect, and gratitude. | The need to be a good person in your eyes and those of others. Your caring for others. Belief in the Golden Rule. Desire to maintain rules and authority that support stereotypical good behavior. |
| Stage 4. Social System and conscience | Fulfilling the actual duties to which you have agreed. Laws are to be upheld except in extreme cases where they conflict with other fixed social duties. Right is also contributing to society, the group, or institution. | To keep the institution going as a whole, to avoid the breakdown in the system “if everyone did it,” or the imperative of conscience to meet one’s defined obligations. |
Six Stages of Moral Development (continued)

<table>
<thead>
<tr>
<th>Level and Stage</th>
<th>Content of Stage “What is right”</th>
<th>Reasons for doing right</th>
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<tr>
<td><strong>Level 3: Postconventional or principled:</strong></td>
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<td>Stage 5. Social contract or utility and individual rights</td>
<td>Being aware that people hold a variety of opinions, that most values and rules are relative to your group. These relative rules should usually be upheld, however, in the interest of impartiality and because they are the social contract. Some nonrelative values and rights like life and liberty, however, must be upheld in any society and regardless of majority opinion.</td>
<td>A sense of obligation to law because of one’s social contract to make and abide by laws for the welfare of all and for the protection of all people’s rights. A feeling of contractual commitment freely entered upon, to family, friendship, trust and work obligations. Concern that laws and duties be based on rational calculation of overall utility, “the greatest good for the greatest number.”</td>
</tr>
<tr>
<td>Stage 6. Universal ethical principles</td>
<td>Following self-chosen ethical principles. Particular laws and social agreements are usually valid because they rest on such principles. When laws violate these principles, one acts in accordance with the principle. Principles are universal principles of justice: the equality of human rights and respect for the dignity of human beings as individual persons.</td>
<td>The belief as a rational person in the validity of universal moral principles, and a sense of personal commitment to them.</td>
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Kohlberg's stages of moral reasoning are characterized by four structuralist assumptions (e.g., Higgins, 1995; Walker, 1988). These four assumptions or principles include the following: a) each stage is qualitatively and distinctly different from the other stages, however, each stage serves the same function at its respective developmental level; b) the sequence of the stages is invariant (that is, development follows a sequential order from lower stages to higher stages); c) the stages are "structured wholes," in that individuals will use reasoning reflective of one stage most of the time with adjacent stages used concurrently; and d) the stages are integrated hierarchically, so that the higher stages incorporate the lower stages. Longitudinal data derived from interviews using moral dilemmas has validated the stages with respect to the aforementioned criteria (Colby, Kohlberg, Gibbs, & Lieberman, 1983).

With respect to the development of moral reasoning, like Piaget (1932/1965), Kohlberg (1976) held that an individual's sense of justice initially is very external (i.e., imposed by others) but has the potential to develop into an internalized sense of justice. The child who is reasoning at stage one, for example, is concerned with doing good so as to avoid punishment given out by an authority figure. The adult, in contrast, who reasons at stage five, sees personal values and opinions as central to any decision of what is right or wrong.

**The Measurement of Moral Reasoning**

In addition to his contributions of a stage-model of moral reasoning, as mentioned previously, Kohlberg also contributed enormously to the field of moral development through his construction of a measure of moral reasoning known as the Moral Judgment Interview (MJI; Colby & Kohlberg, 1987). The MJI represented one of the first attempts to reliably measure moral reasoning. The measure consists of presenting an individual a series of moral dilemmas and having him/her respond to a number of probe questions that are designed to elicit his/her level of moral reasoning. All interviews are administered individually by a trained interviewer and are...
recorded and later transcribed and scored. The dilemmas used in the MJT center around a variety of fundamental moral issues. These include: life versus law, morality and conscience versus punishment, and contract versus authority. Nine to twelve standardized, probe questions are posed by the interviewer following each moral dilemma. The individual's answers (the moral judgments) are then matched to statements (the criterion judgments) representative of Kohlberg's stages of moral reasoning in the appropriate section of the scoring manual (Colby & Kohlberg, 1987).

For each individual, two distinct scores are derived from the MJT. An individual's reasoning can be assigned a global stage score and a weighted average score. The global stage score identifies where the individual is on the continuum of Kohlberg's stage model [either identifying whole stages (e.g., 1-5) or identifying transitional stages (e.g., 1/2, 2/3, etc.)]. The weighted average score converts or translates the stage score into a weighted percentage. This weighted percentage, in turn, reflects the stage that best characterizes the moral reasoning of the individual (e.g., 100 = stage 1, 200 = stage 2, ... 500 = stage 5).

Kohlberg (Colby & Kohlberg, 1987) was not the only researcher interested in quantifying moral reasoning. Rest (1974) helped pioneer the first widely used paper and pencil measure of moral reasoning known as the Defining Issues Test (DIT). The DIT is a measure that evaluates an individual's moral reasoning by having him/her rate and rank a series of statements that correspond to a moral dilemma. Rest's work stems from, and is heavily influenced by, the Kohlbergian approach to moral reasoning. The DIT consists of six moral dilemmas (although a short form employing three dilemmas can also be used). The dilemmas used in the DIT are similar to those found in the MJI and, as such, focus upon comparable moral issues as those found within the MJI.
The DIT, administered in a paper and pencil format, requires a minimum of sixth-grade reading ability to complete (Schlaefli, Rest, & Thoma, 1985). Individuals are asked to read a series of moral dilemmas and then to rate 12 statements on a scale of importance (e.g., “great”, “much”, “some”, “little”, and “no”). Once rated, the individual selects four of the statements and ranks them from “Most Important” to “Fourth Most Important.” Scoring of the DIT provides information regarding the percentage of reasoning found at the different moral stages as well as a “P” score which indicates the amount of reasoning an individual utilizes at Stages 5 and 6. Because the DIT is a recognition task rather than a production task, it elicits higher stage reasoning than would a production task such as the MJII (Rest, 1979).

The original DIT has recently been updated and the new version, the DIT2, includes changes in three areas: the dilemmas and items, in the algorithm of indexing, and in how unreliable participants are detected (for a review of the DIT2 see Rest, Narvaez, Thoma, & Bebeau, 1997, 1999). A new feature of the DIT2 is that it furnishes an N2 index that represents an individual’s preference for postconventional reasoning.

A third measure of moral reasoning is Gibbs’ Sociomoral Reflection Measure - Short Form (SRM-SF; Gibbs, Basinger, & Fuller, 1992). Influenced by the MJII, the SRM-SF also explores the moral issues of life, law, affiliation, and contract as well as other moral values but does so without the use of dilemmas. Rather, the SRM-SF elicits the moral judgments of individuals by using lead-in statements instead of complete dilemmas (e.g., “Let’s say a friend of yours needs help and may even die, and you’re the only person who can save him or her”; and “Think about when you’ve made a promise to a friend of yours”). Individuals are then asked to rate the importance of each moral issue prevalent within each question according to a three-point Likert Scale (e.g., “Very Important,” “Important,” “Not Important”). Next, individuals are asked
to respond in writing to a probe question (e.g., "Why is that very important, important, or not important?") to elicit the justification supporting their reasoning.

Once the questions have been rated and justifications have been provided, a score may be derived. The scoring of the SRM-SF (Gibbs, Basinger, & Fuller, 1992) furnishes scores that parallel Kohlberg's (1984) first four moral stages. Gibbs, Basinger, and Fuller have regrouped Kohlberg's stages into two distinct categories: immature stages consisting of stages one and two; and mature stages consisting of stages three and four. Kohlberg's stages five and six are not accounted for in the SRM-SF as Gibbs et al. posit that these two stages constitute moral philosophies occurring seldom (or never in the case of stage six) within the literature supporting the MJI. As such, the SRM-SF does not quantify nor provide scores above stage four. The SRM-SF scoring manual (Gibbs et al., 1992) is used to match the justifications provided by the participant with stage-indicative justifications. A score is assigned to each justification (e.g., from 1.00 to 4.00). Totaling these scores furnishes an overall Moral Maturity Score.

As with all measures, each measure of moral reasoning has its limitations. The limitations of the MJI, for example, have been highlighted throughout the moral reasoning literature (e.g., Carlo, Eisenberg, & Knight, 1992; Damon, 1977; Haan, Aerts, & Cooper, 1985; Kurtines & Greif, 1974). For example, because the MJI is a production task (i.e., an interview is used to gather information concerning an individual's moral reasoning), a criticism has been that the interview questions may vary across subjects (Kurtines & Greif, 1974). Further, the use of the interview technique is potentially problematic as it relies uniquely on verbal abilities and is vulnerable to experimenter bias (Carlo et al., 1992). Additionally, the MJI requires a trained interviewer to administer and a trained coder to score. Thus, gathering data using the MJI can be costly and time consuming.
The limitations of the DIT lie principally in its restricted age usage, namely that it cannot be used with children. Specifically, the sixth grade reading level required of individuals taking the DIT limits its use to sixth grade students to adults. While the reading level suggests that the DIT may be suitable for preadolescents, the tasks required of students (i.e., rating and ranking statements) requires test-taking abilities that typically surpass sixth grade ability. In their recently proposed DIT2, the youngest participants used by Rest and his colleagues to validate the measure were ninth graders (Rest, Narvaez, Thoma, & Bebeau, 1999). The DIT format itself has been challenged in that the number of issues used within the measure are unequal for each of Kohlberg's six stages of reasoning. Moreover, the statements themselves are arranged so that lower stage statements always appear before the higher stage statements (Martin, Shafto, & Van Deinse, 1977). The DIT nevertheless has its strengths in its ability to be administered to large groups and its objective nature.

Just as the MJI and the DIT have limitations, so too does the SRM-SF. The SRM-SF was initially proposed as a group-administered counterpart to the MJI and, like the MJI, the SRM-SF is a production rather than a recognition task (Gibbs, Arnold, Ahlborn, & Cheesman, 1984). The correlation between the SRM-SF and the MJI has been established at .69 (Gibbs et al., 1992). Recall that the SRM-SF requires students to respond to questions by first rating, then justifying their responses in writing. While the reading demands of the SRM-SF are not onerous, the SRM-SF does require students to generate written responses to 11 questions. As such, the SRM-SF requires participants to possess proficient writing skills. Further, given the independent nature of the SRM-SF, student attention over the course of the 11 questions may wane.

When reviewing and determining the suitability of any moral reasoning measure, one must consider the context within which the measure will be administered. A public elementary school serves as the context for the present investigation. The school setting poses unique challenges for
researchers interested in measuring the moral reasoning of students. First, when working with groups of students (e.g., using dilemma discussion groups), a group-administered measure proves valuable in assessing the moral reasoning of students efficiently. Second, students must be able to independently complete the measure in a reasonable time period. Third, the contents of the measure (i.e., dilemmas or lead-in statements) should reflect moral issues that are relevant and meaningful for preadolescent, elementary students. Of the three measures reviewed above, it appeared that the SRM-SF was best suited for use with grade six and seven students within the public school. The ease with which the SRM-SF may be administered, the time required to complete (e.g., 20 minutes for sixth-grade students), the suitability of the moral issues found within the lead-in statements of the SRM-SF, and the ease of scoring rendered this measure appropriate for the needs of the present research.

Although the MJI, the DIT, and the SRM-SF have allowed researchers to empirically measure an individual’s moral reasoning, they have shed little light on the factors that contribute to an individual’s growth in moral reasoning. That is, what are the conditions that facilitate moral development? Kohlberg (1976) was certainly one researcher whose interest in moral development was not limited to investigating the psychometrics associated with moral development. He also postulated as to the factors responsible for facilitating moral growth. Following is an overview of the factors Kohlberg identified as underlying moral development.

Factors Underlying Moral Development

Kohlberg (Blatt & Kohlberg, 1975), building upon Piaget’s (1973) theory of cognitive development that emphasized the roles of cognitive disequilibrium and a rich and stimulating learning environment, proposed democratic approaches to educating students as a means of promoting moral development. These approaches to fostering moral development have been conceptualized into two distinct conditions or clusters of factors: indirect conditions and direct
conditions (e.g., Kohlberg, 1976; Kohlberg & Higgins, 1987; Taylor & Walker, 1997). Four
distinct indirect conditions have been identified. These include: a) having teachers and educators
promote moral development by encouraging democracy within the school’s setting, (that is,
distributing the power and responsibility between all members of the school community); b)
applying rules impartially and fairly to all students; c) developing a sense of community among
students and teachers; and d) providing a structure or organization for students that is simple
enough to be understood by the students but complex enough to promote development. Direct
conditions, in contrast, include: a) role-taking opportunities; b) the consideration of fairness (e.g.,
fairness discussions); c) exposure to +1 reasoning, or reasoning that is morally advanced by one
stage above the individual’s current stage; d) common decision-making; and e) participation in
regular moral discussions (e.g., teacher-facilitated Socratic questioning). The combination of
both indirect and direct conditions is thought to best facilitate and promote moral growth in
students (Schonert-Reichl & Hymel, 1996).

Building upon the initial insights offered by Kohlberg (1976), other researchers have
contributed further to our understanding of the role cognitive conflict plays in fostering moral
development. For example, Berkowitz (Berkowitz & Oser, 1985) and Walker (1988) have
conducted research examining the role cognitive conflict plays in the development of moral
reasoning. One focus of the research conducted by Berkowitz was to examine transactive
discussion within the context of moral dilemma discussions (Berkowitz, Oser, & Althof, 1987).
Berkowitz, influenced by the work of Piaget, posited that the discussions occurring within a MDG
foster development by confronting group members with transactions or reasoning that challenges
their existing moral cognitive framework or is incompatible with their current moral
logic. Berkowitz et al. describe transactive discussion as follows:

When one considers another’s (alter’s) construction in the context of one’s own (ego) construction and subjectively discovers incompatibility, one experiences disequilibrium, which is a necessary but not sufficient condition for stage growth. The more actively and fully one considers incompatible constructions, the more likely one is to experience disequilibrium. (p. 325)

Berkowitz (Berkowitz & Oser, 1985) identifies cognitive conflict as a “first order” variable that promotes moral development. Factors such as exposure to +1 stage reasoning (exposing participants to statements representing a moral stage one above their current stage), peer interactions, the effect of the composition of the class, and the effect of the teacher as facilitator of moral growth are all “second order” variables. Berkowitz posits that these second order variables serve as agents that stimulate the first order variable of cognitive conflict. Cognitive conflict then, as seen by Berkowitz, is a variable that is generated via several underlying or second order variables, yet stands on its own as a principal force driving moral development.

In addition to the work of Berkowitz (Berkowitz & Oser, 1985; Berkowitz, Oser, & Althof, 1987), there exists a body of research by Walker (1983, 1988) that has explored the role of cognitive conflict within the context of moral development. While it was the work of Walker that helped clarify the role cognitive conflict plays in moral development, it was Turiel (1966; 1974) who first demonstrated that moral growth could be facilitated by exposing participants to moral interventions that incorporated +1 arguments. In his initial investigation, Turiel assigned a group of boys to either a control condition or to one of three experimental conditions that included exposure to +2, +1, or to -1 reasoning. Turiel then had the boys participate in a role-playing scenario with an adult experimenter who presented the pro and con issues prevalent within a moral dilemma. The results of Turiel’s study provided initial support for the claim that
exposure to +1 reasoning best facilitated moral development. More importantly, his work set the
stage for further research investigating the impact of +1 reasoning on moral development.

It was Walker (1988) who, in large part, helped clarified the role that +1 stage reasoning
plays in facilitating moral reasoning. Walker investigated the role that cognitive conflict plays in
moral development by using the developmental stage transition models proposed by Kuhn (1979)
and Levine (1979) known respectively as the displacement or nondisplacement paradigms.

According to the displacement model, growth occurs when the individual experiences
collision at his or her own stage level in response to weaknesses or deficiencies he or she
recognizes in his or her thinking. No exposure to higher level reasoning is required in the
displacement model as the collision generated within the individual’s own stage level is sufficient
to foster new growth. Once cognitive collision has been experienced by the individual, he or she is
then motivated to reestablish equilibrium. According to the nondisplacement model, exposure to
higher level reasoning (i.e., +1 stage above one’s current stage level) creates collision for the
individual as he or she realizes the discrepancies between his or her current structures and those
represented by a higher stage. As in the displacement model, in the nondisplacement model
collision is experienced by the individual that is unsettling and he or she then strives to restore
equilibrium. The result of this striving to restore equilibrium is growth and development. Walker
(1988) posits that these two models of development are compatible and do not represent mutually
exclusive pathways to higher levels of moral reasoning. Rather, Walker argues that development
may occur via either model - within one’s own stage or via exposure to higher stage reasoning.

In earlier research examining the role of cognitive collision in moral development, Walker
(1983) conducted a study examining cognitive collision within an individual’s own level of moral
reasoning and at a level one stage higher than the individual’s reasoning. In his study of 117 fifth
through seventh-grade students, Walker had children listen to adult actors present opinions and
reasoning on six moral dilemma stories. One specific question of Walker’s study was to examine if exposing participants to contradictions and inconsistencies at their own stage level of moral development (i.e., a test of the displacement model) was sufficient to facilitate stage growth. Previous reports in moral reasoning literature held that exposure to reasoning at a +1 stage, that is, at a stage that is one level more advanced stage than one’s own stage, was necessary for moral growth to occur (Turiel, 1966).

The adult actors in Walker’s (1983) study presented arguments related to the moral dilemmas in a variety of conditions. The four experimental conditions employed by Walker are found in Table 2. Walker’s findings revealed that students exposed to pro/con arguments at their own stage level made gains in moral reasoning although not to the same extent as the students exposed to the pro/con +1 condition. Walker describes the role of cognitive conflict at the individual’s own stage level as such: “The pro/con 0 condition demonstrates that awareness of the contradictions and inadequacies of one’s own stage is an alternate means by which development can be stimulated. Systematic exposure to higher stage reasoning seems to be unnecessary.” (p. 108).
Walker’s (1983) findings, in essence, support both the displacement and the nondisplacement models of development. That is, while development does indeed occur when individuals are encouraged to recognize the discrepancies and inadequacies of their own moral logic, moral development is also facilitated when individuals are encouraged to recognize the discrepancies and inadequacies between their logic and that of someone more morally sophisticated (i.e., at a +1 stage level). Walker empirically established that conflict generated in both the opinions and in the reasoning of participants via exposure to +1 statements that are either congruous or in opposition to the participant’s own reasoning best stimulates development. Walker contends that the “pro/con + 1 condition” best fosters moral development because it challenges both the opinions and the reasoning of the individual.

The findings put forth by Walker (1983) are especially relevant to the current investigation. Walker’s research provides convincing support for the practice of incorporating

<table>
<thead>
<tr>
<th>Condition</th>
<th>Description</th>
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<tbody>
<tr>
<td>Pro/Con +1</td>
<td>Presented the participant with arguments advocating opposing solutions at one stage above the participant’s own level of moral reasoning.</td>
</tr>
<tr>
<td>Con +1</td>
<td>Exposed the participant to arguments one stage above his or her level of moral reasoning. The arguments presented were consonant with one another yet opposed the participant’s position concerning the central action choice of the character in the moral dilemma.</td>
</tr>
<tr>
<td>Pro +1</td>
<td>Exposed the participant to arguments that were one stage above his or her reasoning and that supported the position taken by the participant.</td>
</tr>
<tr>
<td>Pro/Con 0</td>
<td>Presented opinions that conflicted with one another but were at the participant’s dominant stage of reasoning.</td>
</tr>
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both pro and con + 1 statements into the research design. By exposing each participant to pro and con statements one stage above his or her current reasoning helps to ensure that the participants experience the cognitive conflict necessary for moral development.

Two Pathways of Moral Development

Thus far, two parallel models for facilitating moral development have been presented. Recall that the discussion of the role of cognitive conflict was initially grounded in Piaget's (1963, 1971) and Smedslund's (1966) inter- and intra-individual models of fostering cognitive conflict.

The work of Kohlberg (1976), notably his claim that both indirect and direct conditions facilitate moral development, may be incorporated into the models for moral development outlined above. Kohlberg's emphasis on social interactions as a means of creating cognitive conflict in students supports an interindividual model (see Figure 1). This interindividual model illustrates the variety and combination of factors that afford individuals opportunities to engage in social interactions (Smedslund, 1966). The second approach is the intraindividual model (see Figure 2). This intraindividual model outlines the variety and combination of factors that afford individuals opportunities to experience cognitive conflict concerning moral issues in isolation, without any social interaction. It should be noted that the author is acknowledging that intraindividual cognitive conflict is the primary mechanism fostering moral development. Further, it is recognized that intraindividual cognitive conflict may be facilitated either in a group setting or individually (Chapman & McBride, 1992). Following is a review of the literature supporting an interindividual approach to moral development followed by a review of the literature supporting the intraindividual model.
Figure 1

Interindividual Model of Moral Reasoning

- School (e.g., Just Community)
- Classroom (e.g., Democratic Teaching)
- Home (e.g., Authoritative Parenting)

- Perspective-Taking Opportunities
- Fairness Discussions
- Common Decision Making
- Regular Moral Dilemma Discussions
- Exposure to +1 Reasoning

- Intraindividual Cognitive Conflict
Figure 2
Intraindividual Model of Moral Reasoning

DEVELOPMENT OF MORAL REASONING

PRIMARY FACTOR

- Intraindividual Cognitive Conflict

SECONDARY FACTOR

- Individual Exposure to Moral Dilemmas
Interventions That Stimulate Change Via Interindividual Conflict

Given the social nature of the dilemma discussion format, a procedure that relies heavily upon the interactions and contributions of several participants, it may be considered an interindividual approach to stimulating moral development. Although moral dilemma discussions typically constitute a Kohlbergian approach to moral education, certainly given their reliance upon controversial moral topics and the use of Socratic questioning, historically there have been three distinct approaches (Higgins, 1995): 1) the character education approach; 2) the values clarification approach; and 3) the cognitive-developmental approach. A brief explication of each approach will help differentiate the Kohlbergian cognitive-developmental approach to moral education from other, less cognitively-based, approaches to facilitating moral reasoning.

The character education approach, which was popular in the 1920’s and 1930’s and then again in the 1980’s and 90’s, emphasized instilling a variety of traits in children (Higgins, 1995). Character education programs typically promote traits such as honesty, loyalty, responsibility, moral courage and friendliness and considers the sum of these traits a reflection of strong morality. The second approach, the values clarification approach, encourages students to explore their own values and differs from the character education approach in that it tolerates a certain diversity with respect to the values that students adopt. That is, in values clarification all students are not encouraged to adopt the same values. Rather, a tolerance for differing value positions is encouraged. The last approach, and the approach that fuels this research project, is the cognitive-developmental approach to moral education.

It was initially John Dewey (1966) who inspired this approach with his writings and insights on the nature of education. Dewey held that, “The aim of education is growth or development, both intellectual and moral. Ethical and psychological principles can aid the
school in the greatest of all constructions, the building of a free and powerful character.”

(Dewey, 1966, p. 10) Since Dewey, several individuals have shaped the cognitive-developmental approach to moral education. None, however, has had greater influence on molding this approach than Lawrence Kohlberg. Kohlberg’s cognitive-developmental approach rests heavily upon the use of moral dilemma discussions as the cornerstone of interventions designed to promote moral development. Recall that dilemma discussions provide ample opportunity for individuals to be exposed to a variety of arguments that are likely to challenge their currently possessed moral logic. This, in turn, creates cognitive conflict, the mechanism responsible for moral development.

The moral discussion intervention was initially proposed by Moshe Blatt, a doctoral student of Kohlberg’s. Blatt (1969) introduced dilemma discussions as a means of facilitating stage development by initially presenting groups of delinquents and, later, high school students with hypothetical dilemmas (Blatt & Kohlberg, 1975). In this approach, discussion facilitators typically read a moral dilemma aloud to a group of participants. Once the dilemma had been presented to the group, the task then became to guide the students in a discussion of the issues prevalent within the dilemma all the while exploring the justification for their views through a series of Socratic probe questions. Dilemma discussions used today typically follow the format outlined by Berkowitz (1993), whereby the facilitator follows a series of steps that include: providing students with a rationale for the discussion; establishing guidelines or setting a tone for the discussion; organizing a seating arrangement conducive to interaction and discussion; training the participants in discussion skills; and, facilitating the sharing of moral logic via Socratic questioning.

The specific advantage of the dilemma discussion technique is that it provides students with abundant perspective-taking opportunities and experiences. What is especially beneficial to the participants is the fact that they must justify the reasons for the decisions they make with
respect to the dilemmas presented, often within a context where their views are being challenged by peers who hold leadership roles within the group and who challenge their decisions with arguments that reflect a sophisticated level of moral reasoning (Gibbs, Arnold, Ahlborn, & Cheesman, 1984). Gibbs argues that discussions should focus upon relevant sociomoral dilemmas or problem situations. Indeed, the work of Gibbs (1993, 1995; Gibbs, Arnold, Ahlborn & Chessman, 1984) strongly supports the notion that the dilemmas used in moral development interventions be inherently connected to the lives of the participants.

A review of the literature supporting an interindividual moral reasoning intervention begins with Blatt’s (1969) pioneer study on the effects of moral dilemma discussions on Sunday School children. Blatt presented students with hypothetical moral dilemmas and, through the use of Socratic probe questions, encouraged students to resolve the dilemmas by reaching a consensus within their discussion group as to how best to resolve the dilemma. Building upon this initial investigation, Blatt and Kohlberg (1975) enlarged their experimental design and empirically tested the efficacy of a dilemma-based intervention on the moral reasoning of 132 students ranging in age from 11 to 16 years. Their research design allowed them to compare treatment and control groups at two grade levels (sixth and tenth), across four levels of sociometric status, and between both African-American and Caucasian students. For the purposes of the present investigation, only the findings for the moral reasoning dimension of their study will be reported. The results of their 12-week dilemma discussion intervention revealed a one-third stage increase in moral reasoning for those students in the treatment conditions as compared to their counterparts in the control groups. In a follow-up study one year later, the change in moral reasoning held for the students in the treatment conditions. From these
initial empirical studies using moral dilemma discussions arose the term “the Blatt Effect” (Kohlberg, 1975). Specifically, the Blatt Effect described the 1/3 change in moral reasoning stage score that individuals experienced after having participated in a dilemma-based discussion intervention. The promising findings of Blatt and Kohlberg (1975) had a far reaching impact upon the moral development research community. Indeed, Blatt and Kohlberg’s replication of Blatt’s (1969) doctoral research helped establish the efficacy of moral dilemma discussions in promoting the moral reasoning stage scores of participants by 1/3 of a stage (Higgins, 1995). This paved the way for a plethora of research that employed moral dilemma discussion interventions as a means by which to promote moral growth. Since then, researchers have used the dilemma discussion format with a variety of individuals, in a variety of settings, and with a variety of different group sizes (e.g., Arbuthnot & Gordon, 1986; Gibbs, Arnold, Ahlborn, & Cheesman, 1984; Taylor & Walker, 1997). The section that follows will critically examine research findings from a cross-section of experimental settings. Each of the studies reviewed in this section employed dilemma discussion methodology and/or research designs that have particular relevance to the methodological approach undertaken in the current investigation.

Research by Damon and Killen (1982) helped to establish the important role peers play in promoting growth in moral reasoning. Their study examined the effects of peer discussion on the reasoning of 78 children aged 5 to 9 years. By videotaping the interactions among the group members, Damon and Killen were able to identify the nature of the interactions among peers that best facilitated moral growth. Specifically, Damon and Killen were interested in analyzing the social-interactional characteristics of the children who advanced in moral reasoning while participating in peer-based dilemma discussions. The results of their study revealed that children who were rejecting and conflictual in their interaction style during the discussions did not advance in their moral reasoning to the same extent as children who were more open, compromising, and
collaborative in their discussion style. The findings of Damon and Killen suggest that it is not confrontational or challenging statements made by peers that fosters advancement to higher stages but rather the reciprocal quality of statements and the transformation of statements by peers that are most effective in promoting development. Specifically, it was the children who engaged in both providing and receiving statements that were first, accepted by their peers and, second, transformed (clarified or elaborated upon) by their peers who experienced the greatest increase in moral stage scores.

The work of Damon and Killen (1982) raises questions as to how cognitive conflict is best generated and certainly highlights the important nature of the discussion itself as it relates to moral development. Indeed, their findings provide a framework within which the origins of cognitive conflict may be critically questioned. Specifically, the findings of Damon and Killen suggest that it may not be the confrontational nature of the dilemma discussion procedure that fosters moral growth (i.e., by creating cognitive conflict) but rather the ability of students to participate in perspective-taking activities that is important for the facilitation of moral growth. That is, by encouraging students to take perspectives other than their own, students are encouraged to modify, transform, and clarify their own reasoning. This, in turn, contributes to the students reconstructing more sophisticated levels of reasoning.

Haan (1985) also examined the characteristics of productive moral discourse in her investigation of 119 university students assigned to one of two moral interventions: moral dilemma discussions or the playing of moral games. Students participated in five, 3-hour sessions in which they either discussed hypothetical moral dilemmas or they played moral games. Although the primary aim of Haan’s research was to investigate the relationship between cognitive versus social interventions and their effect on moral development, she also examined the nature or characteristics of moral discourse and interactions that appear to contribute most to
advances in moral reasoning. The findings from Haan's study revealed that students profit best from moral interventions when they a) experience moral-social conflict that is both interactive and emotional; and b) when they are able to "cope functionally." Haan describes coping functionally as recognizing and tolerating the conflict that arises within moral discussions or games in such a way that the individual is able to learn from his or her experience. According to Haan, "... effective morality from the interactional perspective requires some self-doubt about one's own self-righteousness, as well as willingness to admit that another's claims may be superior to one's own." (Haan, 1985, p. 1005)

The work of Rosenkoetter, Landman, and Mazak (1980), which examined the effects of a 7-week intervention with a small sample of 19 delinquent 13- to 16-year-old boys and girls found moderately significant increases (one-fifth of a stage score) after exposing participants to a series of moral dilemma discussions. The researchers concluded that the relatively small gain in moral reasoning was attributable to the age of the participants. Rosenkoetter, Landman, and Mazak argue, as did Kohlberg (Kohlberg & Turiel, 1971), that after the age of 13, progression from preconventional morality (i.e., stage 2) to conventional morality (i.e., stage 3) becomes increasingly difficult. In fact, Kohlberg (1976) hypothesized that individuals became less malleable to change the longer their reasoning was fossilized at lower stage levels (i.e., stage 2). This phenomenon is referred to as the "critical period hypothesis." Because of the previous research cited above, for the present study, students ranging in age from 11 to 13 years were selected to participate because they were considered to be most likely to be receptive to a dilemma-based intervention.

In an 8-week intervention using moral dilemma discussions, Gibbs, Arnold, Ahlborn, and Cheesman (1984) established further support for the use of dilemma discussions as an effective means of fostering moral reasoning. Like Rosenkoetter et al. (1980), their research examined the
transition from stage two to stage three reasoning. A total of 60 delinquents, ranging in age from 14 to 18 years, participated in this dilemma discussion-based intervention. Participants were randomly assigned to one of three groups: a consensus dilemma discussion group, in which participants were encouraged to agree as to the best decision and the best reason for each dilemma question presented; a nonconsensus dilemma discussion group, in which the participants were not encouraged to reach agreement concerning dilemma decisions and reasons; and a no-discussion group, in which participants were administered pre- and posttest moral reasoning measures but did not participate in any intervention. The results indicated that the intervention was successful in promoting 87.5% of the participants in the experimental condition from stage 2 to stage 3 reasoning. The authors attributed the high rate of transition to two factors: first, the dilemma questions specifically addressed stage 2/3 transitional issues; and second, the dilemmas were adapted to reflect salient issues of concern to the participating delinquent youth. Given the findings of Gibbs et al., in the present study I incorporated some of the methodological characteristics of their research study by ensuring that the Socratic probe questions employed during the intervention phase of the study facilitated stage 2 to 3 transitions and further, that the dilemmas used in the design reflected issues that were directly relevant to the lives of preadolescents.

What is often heralded as a seminal article within the field of moral education because of its attempt to link moral reasoning to observable changes in school-related behavior, is a study conducted by Arbuthnot and Gordon (1986) that examined the effects of a 16-20 week dilemma discussion-based intervention on the moral reasoning and behavior of behavior-disordered and nonbehavior-disordered youth. A total of 48 male adolescents, divided equally into treatment and control conditions, participated in this study. Recognizing the lack of communication skills demonstrated by students, the authors incorporated a 2-week communication skills training
component prior to dilemma discussions within their design. The goal of these sessions was to establish a positive rapport among students in order to ensure that students felt competent and comfortable expressing their views, sharing their feelings, and accepting and respecting the views expressed by others within the group.

Similar to findings reported previously, Arbuthnot and Gordon (1986) reported significant increases in the moral reasoning stage scores of those youths who participated in weekly moral dilemma discussions when compared to those youth in a control group. Increases in moral reasoning scores were sustained in a 1-year follow-up assessment. The unique contribution of the Arbuthnot and Gordon study was its examination of the impact that changes in moral reasoning had on the behaviors of the participants. Indeed, increases in moral reasoning scores were associated with positive changes in several behavioral indices. These included: behavioral referrals; tardiness, scholastic performance; and police/court contacts. Specifically, the authors found that the moral reasoning stage scores of the students in the treatment group versus those in the control group increased as did teacher ratings of behavior and academic performance (e.g., English and Humanities). Additionally, students in the treatment group demonstrated decreases in the number of behavioral referrals they received, decreases in the number of police/court contacts, and decreases in absenteeism. Arbuthnot and Gordon attributed these positive behavioral changes to the development of underlying processes impacting the decision-making abilities of students.

Although Arbuthnot and Gordon’s (1986) research yielded promising findings, there are several limitations to their study, most notably the lack of placebo groups in their design. The principal limitation of excluding a placebo group in the research design was that it failed to allow Arbuthnot and Gordon to attribute changes in moral reasoning stage scores exclusively to the dilemma-based intervention they implemented. Higgins (1980) argues for the importance of a placebo group in research using moral dilemma discussions. Indeed, she argues that the validity
of a dilemma-based intervention is strengthened by incorporating a placebo group into the design. The placebo group consists typically of students who, once randomly assigned, receive a non-moral intervention that parallels closely the moral intervention. That is, if students are receiving weekly discussions of moral dilemmas, the placebo group may consist of having students discuss non-moral topics. The inclusion of a placebo group represents, in essence, the true test of the theory as it allows the researcher to isolate the content (moral) of the discussion and attribute changes in moral reasoning stage scores to the dilemma discussions rather than participation in generic, non-moral discussions.

An additional limitation of the findings put forth by Arbuthnot and Gordon (1986) concerned their lack of control over variables surrounding the discussion facilitator or leader. The reported increase of a half-stage for the treatment condition could, for example, have been attributable to factors stemming from the personality of the discussion leaders. Indeed, the discussion leader plays an integral role in determining the success of the moral dilemma discussions. His or her charisma, enthusiasm, and personality can increase student willingness and motivation to participate in discussions thus distorting the impact the dilemma discussions have upon the participants (i.e., a Hawthorne Effect). A safeguard to this is having more than one discussion facilitator rotating systematically between the control and the treatment groups. This approach was used in the present investigation.

A different interpretation of the findings presented by Arbuthnot and Gordon (1986) has been put forth by Santilli and Hudson (1992) who posit that communication plays a critical role in facilitating cognitive and social perspective-taking. Santilli and Hudson examined a communication-based intervention on the moral reasoning of 17 college students to test if communication training alone facilitated moral reasoning. The DIT was used to assess students' pre- and posttest moral reasoning. Participants in the Santilli and Hudson study received
communication skills training twice weekly over a period of 8 weeks. The skills taught by Santilli and Hudson focused on a number of topics related to interpersonal communication. These included verbal and non-verbal communication, person-perception, conflict management, empathic listening, and participation in role-playing opportunities. Their findings suggested that interpersonal skills training was an effective means of fostering social and emotional perspective-taking that, in turn, promoted moral reasoning development. It could very well be that the increases in moral reasoning stage scores reported in the Arbuthnot and Gordon study did not stem so much from the dilemma discussion intervention itself as from the increase in communications skills training the behavior-disordered youth experienced. The findings of Santilli and Hudson provide insight into better understanding the limitations of the research conducted by Arbuthnot and Gordon and, moreover, highlight the importance of including a placebo group in experimental designs.

A further limitation of the Arbuthnot and Gordon (1986) study stems from the unique group of students they studied. Recall that the participants in this study were youth with behavior disorders. Further, the sample consisted of predominantly male adolescents. While it is important to test the efficacy and suitability of moral dilemma discussions with behavior-disordered students, it remains equally important to investigate the impact of such interventions with students whose behavior is less extreme or marked. Thus, in the present study both male and female participants were drawn from regular classrooms.

A research study that comprehensively addressed some of the limitations found in the study by Arbuthnot and Gordon (1986) was carried out by Niles (1986). Niles examined the effects of a moral dilemma discussion group on both the moral reasoning and the behavior of delinquent and predelinquent boys. The 59 participants in his study were assigned to either an experimental group (dilemma discussion), a control group (no treatment), or a placebo group
(non-moral discussion). The interventions occurred twice weekly over the course of 16 weeks and resulted in significant differences among the pre- and posttest scores of participants in the experimental, placebo, and control groups. Specifically, Niles found that the moral discussion intervention was effective in fostering moral growth for participants in the treatment group but not in the placebo or control groups. In fact, 58% of the students in the treatment group experienced gains of one-third of a moral reasoning stage, whereas only 22% of the control and placebo groups experienced comparable gains in stage scores.

Although the work of Niles (1986) helped further establish the efficacy of moral dilemma discussions, it found little support for the idea that changes in moral reasoning were associated with changes in behavior. Specifically, because Niles was interested in changes in moral development as reflected by changes in moral behavior, he chose to examine two dimensions of moral behavior: self-control and self-discipline. The lack of results supporting his thesis that changes in moral development scores would be associated with changes in moral behavior were perhaps attributable to the fact that the changes in the moral reasoning scores of the participants in his study occurred mostly within stages (i.e., horizontally within stage two) rather than across stages. Niles posited that a lack of behavioral change may, in fact, be due to psychometric problems related to the behavioral measures themselves. Niles further recognized that factors such as personality and situational contexts potentially impact behavioral changes.

A master’s thesis that systematically addressed the weaknesses of the design put forth by Arbuthnot and Gordon (1986) and incorporated the strengths of Niles (1986) research was completed by Krivel-Zacks (Krivel-Zacks & Schonert-Reichl, 1996). Krivel-Zacks examined the effect of a moral dilemma discussion intervention on the moral reasoning and behavior of 43 preadolescent elementary students. Students were randomly assigned to a treatment condition (participation in weekly moral dilemma discussions), a control condition (a no treatment condition
in which students participated in non-academic, non-moral classroom activities), or a placebo condition (participation in weekly meetings to develop a questionnaire for adults about preadolescents entitled “Do you know preadolescents?”). A second dimension of this study was to evaluate the impact of a dilemma-based moral reasoning intervention on several behavioral indices. These included: empathy, perspective-taking, teacher-rated social and problem behaviors, academic achievement, and peer-rated prosocial and antisocial behaviors.

The findings of Krivel-Zacks' (1995) research offer further support for the efficacy of the moral discussion group as a means of fostering moral reasoning growth. Specifically, students who participated in a moral dilemma discussion demonstrated significantly greater gains in moral reasoning scores than did their counterparts in the placebo group. Consistent with previous findings (e.g., Arbuthnot & Gordon, 1986), Krivel-Zacks also found significant decreases in student antisocial behavior as measured by teacher- and peer-ratings. Less conclusive results were found for the emotional correlates to moral reasoning of empathy and perspective taking. The author posited that a lack of strict control over the activities of the control group may have confounded the results for this group on these variables. That is, the students in the control group may, in fact, have participated in activities that facilitated their moral growth. The students in the control group engaged in journal writing, an activity akin to a personality development program. Personality development programs have been found to promote moral reasoning in that they foster personal reflection and perspective taking, factors that facilitate moral development (Schlaefli et al., 1985).

In an attempt to explore further the impact the composition of the discussion group has on the moral reasoning of participants, Kruger (1992) examined differences between discussions composed solely of children versus those in which an adult discussed a moral dilemma with a child. That is, Kruger isolated the impact of peer versus adult transactions by pairing child
participants with either a peer or with an adult and presenting each dyad with two moral
dilemmas. A total of 48 middle class females with a mean age of 8.6 years participated in
Kruger’s study. Rather than having the participants engage in a formal moral dilemma discussion,
Kruger had participants generate and discuss competing solutions to two dilemmas. To evaluate
possible gains in moral reasoning, the participants were administered a pre- and posttest dilemma
before and after their dilemma discussions. Each dilemma discussion was tape recorded and later
transcribed. Analysis of the coded transactions between the child-child and child-adult dyads
allowed Kruger to highlight differences between the two distinct dyad pairings. Participants in the
child-adult dyad produced more self-oriented responses when compared to the other-oriented
responses generated by the participants in the child-child dyads. Her findings help substantiate the
important and egalitarian role that peers play in fostering moral growth. Specifically, her research
highlighted the importance of the quality of the interactions that take place during moral
discussions. Kruger postulated that when children participate in moral discussions with peers they
produce more active reasoning than children paired with adult partners and that the active nature
of this reasoning within an egalitarian context, best facilitates moral growth.

Kohlberg (Blatt & Kohlberg, 1975), posited that the comments and viewpoints generated
by peers provide a rich ground for cognitive conflict to occur. Kruger (1992) has argued that
children’s interactions with peers are especially effective in stimulating cognitive conflict because
dialogues with peers encourage perspective-taking, an integral component of moral reasoning
development (Higgins, 1995). Research conducted by Kruger (1992) lends support to the
contention that peer discussions are more effective than adult-child discussions in promoting the
moral development of early adolescents and children because peer discussions promote
transactive dialogue. Kruger and Tomasello (1986) describe transactive dialogues as discussions
that encourage an individual to use his or her own reasoning to understand the reasoning of his or
her partner, or that require the individual to clarify his or her own thoughts and ideas. Recall that perspective-taking, or taking the view of someone else, is an integral factor promoting moral development (Higgins, 1995). According to Kruger and Tomasello, transactive dialogue is characterized by paraphrasing, refining, completing, or critiquing the reasoning furnished by a partner during a discussion. Given the egalitarian nature of the contributions made by peers during discussions, children are less likely to passively yield to peer comments as compared to statements made by adult authority figures. This, in turn, increases the likelihood that the individual will experience cognitive conflict, the primary mechanism facilitating development.

Rest and Thoma (1985), in their meta-analytic review of studies using the Defining Issues Test, identified the moral dilemma discussion as one of three principal interventions used to facilitate moral reasoning. According to Rest and Thoma, moral reasoning is typically promoted in one of three ways: through academic courses that examine and emphasize the basic premises of various academic subjects; through personality development programs (general approaches to moral development that incorporate experiential activities that promote personal psychological development and self reflection); and, last, dilemma discussions that involve presenting students with a moral dilemma and then having students discuss the moral issues prevalent within the dilemma through the use of Socratic questioning.

Rest and Thoma (1985) specifically examined research that was designed to stimulate gains in moral judgment. In their comprehensive review, Rest and Thoma analyzed a wide variety of studies involving interventions that included classic moral dilemma discussions, psychological development programs, and social studies and humanities courses aimed at increasing moral judgment. In all, Rest and Thoma analyzed a total of 55 studies from which several conclusions were drawn. First, in order for interventions based on moral dilemma discussions to be effective, the intervention should be between three and twelve weeks long. Interventions less than three
weeks are ineffective in promoting moral growth in participants and interventions greater than twelve weeks are no more effective than interventions that last only twelve weeks. Second, with respect to the effectiveness of the discussions themselves on the moral reasoning of participants, Rest and Thoma report, on average, that dilemma-based interventions result in an effect size of .41 versus .36 for personality development programs and .09 for academic courses (Schlaefli, Rest, & Thoma, 1985).²

The above-cited research provides a comprehensive overview of the role moral dilemma discussions play in facilitating moral development. The dilemma discussion group, when conducted in Kohlbergian fashion, fosters cognitive conflict in participants within a social context. Indeed, several research endeavors have illustrated the important role that social interaction plays in exposing individuals to reasoning that not only challenges their current moral logic but, moreover, exposes them to reasoning that is more morally mature or sophisticated than their own reasoning. Having established that an individual's reasoning may be influenced by the members of the discussion group (e.g., adult facilitator or peers), it remains to be established whether or not moral reasoning can effectively be facilitated in isolation, without any social factors contributing to moral development.

It has been established earlier in this review that moral development, like cognitive development, relies heavily upon cognitive conflict as the mechanism of development. Recall that cognitive conflict is thought to be the mechanism fostering both cognitive and moral growth (Piaget, 1968; Chapman & McBride, 1992). Recall as well that there are two distinct means through which cognitive conflict may be generated: interindividually, via social interaction and intraindividually, via the promotion of reflective abstraction (Piaget, 1977; Smedslund, 1966). Following is a review of the literature supporting an intraindividual model of moral reasoning.

² Howell (1982) reports small, medium, and large effect sizes as .20, .50, and .80 respectively.
Interventions That Stimulate Change Via Intraindividual Conflict

Having established the role that social interaction plays in promoting interindividually-generated cognitive conflict within the framework of moral development, it remains important to examine alternative means of fostering moral reasoning. Support for the contention that reflective abstraction may prove to be a viable alternative to peer interactions in facilitating moral development comes from research in three domains: cognitive development, legal reasoning, and moral reasoning. The first type of support comes from the work of Dimant and Bearison (1991), who examined the development of formal reasoning in both social and individual contexts. Forty-five college students who were concrete operational reasoners or in transition between concrete and formal operations served as participants in the study. Participants were randomly assigned to either experimental or control conditions with the experimental conditions being comprised of dyads consisting of either two participants who were concrete operational reasoners or one concrete operational and one transitional reasoner. Participants met once weekly over the course of 6-weeks during which time they participated in a series of problem-solving tasks involving basic chemical reactions. The task of the participants was to respond to a series of questions based on the chemical reactions they witnessed and created. Participants were encouraged to reach consensus or agreement concerning the questions posed by the research team (e.g., “Do other chemicals have anything to do with it?”). Participants in the control group witnessed and performed the same chemical reactions as did participants in the experimental groups, however they did so in isolation.

The results of Dimant and Bearison’s (1991) study revealed that students who worked on problem-solving tasks in a social context made no greater gains in formal reasoning than did students who worked in isolation. Dimant and Bearison argued that cognitive growth is only

An effect size above .33 is considered to have practical significance (Borg & Gall, 1989).
facilitated within the context of peers when certain conditions are met. That is, collaborating with peers on problem-solving tasks best facilitates development when peers cooperatively plan their activities, assign roles for completing tasks, predict outcomes collaboratively, and establish egalitarian relationships within their dyad. The findings of Dimant and Bearison are compatible with those of Broughton (1982) that suggest interactions with peers must actively engage participants in analytic discussion. The work of Dimant and Bearison, who examined college students' ability to perform a series of problem-solving tasks, recognizes that merely creating interindividual opportunities for interaction does not ensure the generation of cognitive conflict in participants.

The second piece of evidence lending support for the contention that interindividual conflict is not the sole means of promoting moral growth comes from a study conducted by Roy and Howe (1990). Roy and Howe investigated interindividual and intraindividual conflict within the context of children's reasoning about legal transgressions. Roy and Howe, who studied the socio-legal thinking of 72 children ranging in age from 9 to 11, argue that interindividual cognitive conflict is no more effective in promoting reasoning about legal transgressions than intraindividual conflict. Participants participated in a pretest measure in which Roy and Howe recorded their responses to questions based on six moral vignettes (e.g., "Is it wrong or alright to steal from an old woman?"). After having identified each participant's stance on the legal issues found within the vignettes, Roy and Howe then assigned participants to one of three conditions. These included: a socio-cognitive conflict group, in which participants were paired with partners who possessed opposing legal views and who were encouraged to discuss questions based on legal vignettes previously presented during the pretest; a cognitive conflict group, in which participants were presented with higher-level statements that conflicted with the judgments they made during
the pretest; and a control group, in which participants answered similar questions to those posed in the pretest.

Roy and Howe’s (1990) findings lend support to the notion that cognitive conflict need not solely be generated within a social context. Participants who were individually presented with statements that conflicted with their own judgments concerning the legality found within six legal transgression vignettes performed as well as those participants who experienced conflict in a social context.

The final source of support for the notion that reflective abstraction or intraindividual conflict may promote the development of moral reasoning comes from the work of Walker (1983) described in detail in an earlier section. His findings lend support for the premise that cognitive conflict may be intraindividually generated. Recall that one of the aims of Walker’s study was to examine if exposing children to contradictions and inconsistencies at their own stage level of moral development was sufficient to facilitate stage growth. Previous reports in moral reasoning literature held that exposure to reasoning at a more advanced stage than one’s own stage, that is at a “+1” level, was necessary for moral growth to occur. The adult actors in Walker’s study presented arguments related to moral dilemmas in a variety of conditions. These included neutral arguments (both “pro” and “con”), arguments in favor of the child’s moral action choice (the “pro” condition), and arguments against the child’s moral action choice (the “con” condition) to the children either at the child’s actual stage level of moral reasoning or at an advanced, “+1” level. Walker’s findings revealed that children exposed to pro/con arguments at their own stage level made gains in moral reasoning as did children exposed to the pro/con +1 condition. It is important to recognize that there was no, or at best, little active participation by the students themselves in the dialogue presented by the adults, yet the students still experienced moral growth as a result of exposure to the arguments. Thus, the methodology employed by Walker to generate
cognitive conflict among participants can be considered intraindividually derived given the passive exposure participants received and their lack of engagement or participation in any social dialogue (Walker, personal communication with J.T. Binfet, 1998).

Taken together, the above research findings lend support for the notion that although interindividually-generated conflict can be an effective means of promoting cognitive and/or moral growth, it is not the only means by which such growth may be facilitated. It behooves researchers and practitioners concerned with promoting moral reasoning development to fully investigate all avenues through which development can be fostered. Recall that Figure 2 outlines a compatible, yet alternate, pathway through which moral reasoning may be facilitated. It rests principally upon the notion of fostering intraindividual cognitive conflict through the use of moral dilemmas. It appears that the key to inducing cognitive conflict intraindividually is to expose or challenge the participant with statements that oppose the views he or she currently possesses. Recall from Walker’s (1983, 1988) research that this may be done at either the participant’s actual stage of moral reasoning or at a more advanced stage. The challenge then becomes to structure an experimental design that would allow researchers to empirically test the two distinct models of interindividually- (conducted via social interaction) versus intraindividually-based (conducted in a context void of social interaction) moral reasoning interventions.

Moral Reasoning and Behavior

Recall from the introduction that there were two aims of this study. The first goal, as described above, was to examine the efficacy of two distinct models for facilitating moral development. The second goal involved examining the effect of each respective moral reasoning intervention on relevant classroom behavior. Thus, in the following section is a review of the research and theory linking moral reasoning to behavior.
An examination of behavior has been incorporated in this study for both theoretical and practical reasons. From a theoretical perspective, it is important to establish further support for the claim that moral reasoning and moral behavior are empirically linked. Blasi (1980), in his meta-analytic review of 75 studies examining moral judgment to behavior found that a significant relation between moral judgment and behavior was found in 76% of the studies reviewed. The results of Blasi’s review supported Kohlberg’s theory that moral development and behavior were monotonically associated. That is, as individuals increase in their moral reasoning so too do they demonstrate conduct or behaviors that are increasingly moral in nature. Moral behavior is typically considered to be behavior that is characterized by honesty, resistance to temptation, and altruism (Kohlberg & Candee, 1984).

It is widely recognized within the moral reasoning literature addressing the relation between moral development and behavior (e.g., Candee & Kohlberg, 1987; Rest, 1983) that an individual’s behavior is influenced by a variety of factors (Bear, Richards, & Gibbs, 1997). Rest (1983), for example, has proposed a four-component model for understanding the multiple factors impacting moral behavior. These include: 1) arousal and awareness that a moral response is required, 2) determining the “moral ideal” or a desirable moral action, 3) selecting a goal or outcome and deciding upon a course of action, and 4) acting on what was intended. Rest further posited that factors such as empathy and guilt, the presence or absence of rewards, and social expectations (e.g., peer pressure) all potentially play a role in determining moral behavior. As can be seen by the number of factors affecting an individual’s moral behavior, behaving morally is more complex than merely “doing what is right”.

The majority of studies that have been conducted have examined the relation between moral reasoning and antisocial behavior (e.g., Arbuthnot and Gordon, 1986; Chandler & Moran, 1990, Lee & Prentice, 1988; Schonert-Reichl & Cantor, 1991) or moral reasoning and conduct
problems (e.g., Bear & Richards, 1981; Richards, Bear, Stewart, & Norman, 1992). There is a need to contribute to the emerging body of research that has examined the relation between moral judgment and prosocial behavior (e.g., Eisenberg, 1986; Eisenberg, Miller, Shell, McNalley, & Shea, 1991; Schonert-Reichl, 1999). Certainly, there is a need to contribute to the existing body of research that has examined the relation between moral reasoning and classroom conduct.

In addition to its narrow focus on antisocial behavior, the previous research that has examined the relation between moral reasoning and behavior has, with the exception of a few studies (e.g., Krivel-Zacks, 1995; Schonert-Reichl, 1999), focused uniquely on obtaining information about student behavior from teachers. In an attempt to address this methodological weakness, the methodology of the present study incorporated teacher-, peer-, and self-ratings of both prosocial and antisocial behavior in the classroom into its design. Having several sources of data collection regarding student behavior offers methodological advantages. Certainly, by incorporating three distinct perspectives (i.e., self-, peer-, and teacher-ratings) of student behavior, the researcher is able to counter any biases that may arise from a mono-method approach to data collection.

In addition to its theoretical relevance, a study of the nature proposed here has several practical implications as well. First, investigating how changes in moral development impact behavior has the potential to provide several practical, pedagogic insights for those professionals working with preadolescents. For example, what is the behavioral profile of a student high (or low) in moral reasoning? Second, examining the relation between moral reasoning and behavior has the potential to assist teachers in designing and implementing curriculum that addresses the affective, rather than uniquely academic, component of curriculum. Last, incorporating a social variable such as behavior into the experimental design holds the potential to help clarify and establish the role of moral education within the public school system. That is, can moral dilemma
discussions improve social behaviors in the classroom? It is through investigations of this nature, investigations that strive to bridge the gap between theory and practice, that the role of moral education may be validated and empirically grounded. Following is a review of the relevant literature in the area of moral reasoning and classroom-related behavior.

As stated earlier, it was initially held that an individual’s moral or prosocial behavior increased monotonically in response to increases in the individual’s moral development (Blasi, 1980). Thus, according to Kohlberg’s stage-model theory of moral development, it would be expected that individuals at higher stages would be characterized by more prosocial behavior than would individuals at lower stages. Conversely, one would expect that individuals at higher stages of moral reasoning would be characterized by fewer antisocial behaviors than would individuals at lower stages. The findings of Bear and Richards (1981) support this relationship. In their study of sixth-grade students, Bear and Richards found that teachers’ ratings of conduct problems decreased as students advanced in their moral reasoning. As such, the behavioral observations identified by Bear and Richards support the Kohlbergian model of moral development.

The relation between moral reasoning interventions and behavior has been investigated empirically by examining the effect of moral dilemma discussions on behavior. The work of Arbuthnot and Gordon (1986), discussed previously, certainly served as a seminal investigation in the field of moral education. Recall that Arbuthnot and Gordon reported decreases in behavioral referrals, tardiness, and police/court contacts and increases in academic performance stemming from a moral dilemma, discussion-based intervention.

Building upon the findings of Arbuthnot and Gordon (1986) is the work of Krivel-Zacks (1995) who also investigated the effect of a dilemma-based intervention on the behavior of preadolescent, elementary students. As reported earlier in the literature review, Krivel-Zacks found that students who participated in weekly moral dilemma discussions received more positive
teacher- and peer-ratings of behavior than those students in a placebo group. Specifically, Krivel-Zacks found that teacher ratings of treatment group students' behavior for self-control, assertiveness, and cooperation increased while teacher ratings of students' misbehavior (e.g., externalizing behaviors and hyperactivity) decreased in comparison to students in the placebo group.

Summary and Hypotheses

Statement of the Problem and Overview of the Study

Both Piaget (1963, 1971) and Kohlberg (1969, 1984) held that cognitive conflict was essential for moral growth. Cognitive conflict occurs when an individual is presented with information that is incongruent with the information he or she currently possesses. That is, the framework or schema of moral reasoning that the participant possesses, of what is right and what is wrong, is challenged by new information and perspectives. This new information, in turn, creates a state of disequilibrium or a condition referred to as cognitive conflict. The individual is then motivated to assimilate and/or accommodate this new information with his or her existing schema.

Although findings in the moral reasoning literature exclaim the importance of social interaction and the role it plays in creating interindividual cognitive conflict by exposing participants to varying perspectives and views (e.g., Arbuthnot & Gordon, 1986; Damon & Killen, 1982; Rosenkoetter, Landman, & Mazak, 1980), there also exists a lesser known body of literature that heralds the pivotal role that reflective abstraction plays in promoting cognitive development (e.g., Dimant & Bearison, 1991; Roy & Howe, 1990). To date, there is little research that has empirically examined the role that reflective abstraction plays in facilitating moral reasoning (cf: Lopez & Lopez, 1998).
The intent of this investigation was to examine the efficacy of two distinctly different moral reasoning interventions, one that emphasized discussing moral dilemmas and another that emphasized reflective abstraction, whereby participants mentally reflected on the issues inherent within the moral dilemmas presented. A second and related goal was to examine how changes in moral reasoning impacted the behavior of preadolescent, elementary students.

Specifically, it was hypothesized that:

1. Participants in both the moral discussion and moral reflection experimental conditions would experience significant pre- to posttest gains in moral reasoning when compared to their peers in the discussion and reflection placebo conditions.

2. From pre- to posttest, participants in the moral discussion and moral reflection experimental conditions would experience a significant increase in self-, peer-, and teacher-ratings of prosocial behavior and self-ratings of academic competence, and decreases in self-, peer-, and teacher-ratings of antisocial behavior.

Significance of the Study

Research that explores and examines the conditions that promote moral reasoning is important for several reasons and has both theoretical and practical significance. From a theoretical perspective it serves to test an area that has received little attention, the concept of reflective abstraction and the role it plays in fostering moral development. Indeed, research such as this may shed light on alternatives to group interventions and help establish a moral intervention that is individually orchestrated. Additionally, the findings stemming from this investigation may offer insight and options to practitioners working with children who are interested in promoting healthy emotional and behavioral changes in students.

Certainly there appears to be a growing need on the part of both parents and educators to assist young people in their quest to make wise moral decisions. Authors such as Bear, Richards,
and Gibbs (1997), Battistich, Solomon, Watson, Solomon, and Schaps (1989), and Lickona (1991) have highlighted the need for sociomoral education in schools and have outlined plans to assist teachers whose goal is to foster moral development within in the school setting. The present study holds the potential to contribute to the endeavor of promoting sociomoral reflection and practice within the public school system by not only clarifying the role that interindividual and intraindividual cognitive conflict play in promoting moral development, but also by further establishing the link between moral reasoning interventions and their impact upon student behavior.
METHOD

Participants

Ninety-seven sixth and seventh grade students (49 girls, 48 boys) drawn from a public elementary school in a large, western Canadian city served as participants in the study. Students ranged in age from 10 to 13 years ($M = 11.6$ years, $SD = .67$). The majority of participants were Caucasian (57%). The rest of the sample was Asian (26%), and preadolescents from other ethnic groups that included Black, East Indian, First Nations, and students from mixed ethnic backgrounds (17%). With regard to family composition, 84% of the students came from two-parent families (either intact or blended), whereas 16% of the students were from single-parent families.

Students were recruited from four classrooms. Initially, a letter explaining the purpose and procedures of the study was sent home with all potential participants for their parents (see Appendix A). As an incentive for students to return permission slips, those who returned their permission slips with either an agreement or refusal to participate had their name entered in a draw for a $20$ movie pass. One movie pass per class was awarded. Of the potential participants, parental permission was received for 98% of them.

Students who received parental permission to participate in the study were asked to complete a student consent form (see Appendix B). Students who did not participate in the study were given an independent, academic task to complete in the library.3

A total of four teachers participated in this study. Prior to the study, teachers attended an orientation meeting during which an overview of the study was presented. Each teacher was given a letter explaining the study and was asked to complete a consent form (see Appendix C).

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3 This task was created and assigned by the student’s classroom teacher.
Given that participating students were required to have proficiency with reading, writing, and speaking English, those students who were not considered to be proficient in English were excluded from the study (n = 1). Additionally, students identified as learning disabled or special needs were also excluded from the study (n = 2).

Measures

Demographic Information (Appendix D)

Students completed a questionnaire designed to gather information concerning their age, gender, ethnicity, and family composition.

Moral Reasoning (Appendix E)

Gibbs' Sociomoral Reflection Measure - Short Form (SRM-SF; Gibbs, Basinger, & Fuller, 1992) was used to assess moral reasoning. The SRM-SF is a paper and pencil measure that is comprised of 11 items that address sociomoral values. Individuals taking the SRM-SF must first rate the moral issues within each question on a three-point scale (i.e., “Very Important,” “Important,” “Not Important”) and then justify their answer in writing.

Scoring of the SRM-SF involves matching the participant’s stage-indicative justifications with those found in the SRM-SF scoring manual (Gibbs et al., 1992). A primary composite or protocol score is then determined for each participant and represents the mean of the item ratings across the 11 items comprising the SRM-SF. A minimum of seven usable justifications are required in order to determine a participant’s protocol score. The protocol score derived from the SRM-SF corresponds to the first four stages of Kohlberg’s Moral Maturity Score (i.e., SRMS ranging from 100 to 400 points). The correlation between the SRM-SF and the MJJ has been established at .69 (Gibbs et al., 1992).

To establish interrater agreement for the scoring of the SRM-SF, 20% of the combined pre- and posttest questionnaires were randomly selected and blindly and independently scored by
a second, trained rater. For the current investigation interrater agreement was .83, above the minimal standard of .80 suggested by Gibbs et al. (1992). Through the scoring of both pre- and posttest measures, no participants were identified as having an SRM-SF score with less than seven usable justifications.

Self-Ratings of Social Behavior (Appendix F)

A measure comprising three subscales [i.e., Emotional Instability (20 items), Prosocial Behavior (15 items), and Antisocial Behavior (20 items); Caprara & Pastorelli, 1993] was used to assess students' self-ratings of behavior. Responses are rated on a three-point scale (i.e., “often,” “sometimes,” “never”). A sample item from the Emotional Instability subscale is “I make trouble for others,” a sample item from the Prosocial Behavior subscale is “I help other kids with their homework,” and a sample item from the Antisocial Behavior scale is “I say bad things about other kids.” Scale scores were computed so that higher scores depicted higher levels of each of the respective behaviors measured.

The reliability and validity of this measure have been reported (Caprara & Pastorelli, 1993). The authors report good internal consistency for each of the subscales (Cronbach’s alphas ranging from .77 to .86). For the present investigation, the internal consistency of each of the subscales was acceptable: Emotional Instability (alpha = .81), Prosocial Behavior (alpha = .58), and Antisocial Behavior (alpha = .88).

Self-Ratings of Academic Competence (Appendix G)

Students’ perceptions of their academic competence were assessed using the Self-Description Questionnaire I (SDQ-I; Marsh, Smith, & Barnes, 1983). The SDQ-I is comprised of seven subscales. For the purposes of the present study, three of the subscales determined to be most relevant to the goals of the investigation were used. These included Reading (e.g., “Work in READING is easy for me”), Math (e.g., “I learn things quickly in MATHEMATICS”), and
General School (e.g., “Work in all SCHOOL SUBJECTS is easy for me”). Each subscale consists of eight items and requires students to rate their answer according to a five-point scale (1 = False), (2 = Mostly False), (3 = Sometimes False/Sometimes True), (4 = Mostly True), (5 = True).

The psychometric properties of the SDQ-I have been reported by Marsh, Smith, and Barnes (1983). The alpha coefficients for each of the subscales were as follows: Reading, .86; math, .89, and general school, .84. The internal consistency for the three subscales of the SDQ-I used in the current investigation was determined. The reliability for all three scales was high (Reading, Cronbach’s alpha = .94; Math, Cronbach’s alpha = .94, and General School, Cronbach’s alpha = .91).

**Peer-Nominations of Behavior (Appendix H)**

A peer-nomination measure was used to assess peer assessments of their classmates’ prosocial and antisocial behavior. The peer-nomination scale, as outlined by Wentzel (1993), was designed to assess individual peer-nominations of classmates’ prosocial and antisocial behaviors. The peer-nomination measure consisted of four behavioral descriptions, two prosocial behaviors (i.e., “shares and cooperates,” “helps other kids when they have problems”) and two antisocial behaviors (i.e., “starts fights,” “breaks rules and do things they are not supposed to”). Each of the descriptions was presented to students on a separate page accompanied by a list of their classmates who had received permission to participate in the study. Students were asked to draw a line through their own name. Students were then asked to circle the names of students who fit the behavioral description (e.g., “Circle the names of students who share and cooperate”). Students could circle as many or as few names as they wanted.

Prior to the study, a decision was made to include both same- and opposite-sex names on the class list. This was done for two reasons: first, the correlation between same-sex and
opposite-sex peer nominations is high among preadolescent samples (Schonert-Reichl, 1999); and second, the aim in examining peer nominations was to investigate acceptance from the entire class, not from the distinct nominations of boys or girls. As such, both boys and girls names were included on the class lists used for peer nominations.

For each of the four descriptors, a proportion score was determined for each student. This was determined by calculating the number of nominations each student received divided by the number of his or her participating classmates.

Teacher-Ratings of Behavior (Appendix I)

In order to measure teachers' evaluations of student behavior, the Social Skills Rating System (SSRS; Gresham & Elliot, 1990) was used. The SSRS consists of 57 items and is comprised of questions pertaining to three distinct subscales: Social Skills, Problem Behaviors, and Academic Competence.

With the exception of Academic Competence, each of the subscales is composed of three distinct indices. The Social Skills component includes a subscale for Cooperation (e.g., "Cooperates with peers without prompting"), Assertiveness (e.g., "Introduces him or herself to new people without being told"), and Self-Control (e.g., "Uses free time in an acceptable way"). The Problem Behavior subscale includes indices that examine Externalizing Behaviors (e.g., "Argues with others"), Internalizing Behaviors (e.g., "Acts sad or depressed"), and Hyperactivity (e.g., "Fidgets or moves excessively").

Teachers completing the SSRS are asked to rate students according to a 3- or 6-point scale. The Social Skills subsection of the SSRS consists of 30 statements and requires teachers to rate students on a 3-point scale (i.e., "Never," "Sometimes," or "Very Often"). The Problem Behaviors subsection, comprised of 18 statements, asks teachers to rate the frequency of behavior (i.e., "Never," "Sometimes," or "Very Often"). Eight statements are found within the Academic
Competence subsection and require the teacher to rate students on a six-point scale that includes: Lowest 10%, Next Lowest 20%, Middle 40%, Next Highest 20%, and Highest 10%.

Scoring of the SSRS involves adding the subscale scores for each of the subsections (e.g., adding the scores for Externalizing Behaviors, Internalizing Behaviors, and Hyperactivity to obtain a Problem Behaviors score). Higher scores indicate more prosocial behaviors or a greater number of problem behaviors.

The psychometric properties of the SSRS have been reported by Benes (1995) who assessed the reliability and validity of each of the subscales comprising the SSRS. The internal consistency of each of the subsections of the SSRS, as reflected by Cronbach’s alphas ranging from .83 to .94, is high. For the present investigation, each of the subscales was found to have acceptable internal consistency scores: Cooperation (alpha = .94), Assertion (alpha = .81), Self-Control (alpha = .88), Externalizing Problems (alpha = .91), Internalizing Problems (alpha = .79), Hyperactivity (alpha = .94), and Academic Competence (alpha = .93).

Procedure

Prior to the commencement of the intervention, students received pretest measures that included a demographic questionnaire, a measure of moral reasoning, self-ratings of prosocial and antisocial behavior, self-ratings of academic competence, and peer-nominations of prosocial and antisocial behavior. With the exception of the demographic questionnaire, these measures were also administered at the end of the intervention. Pre- and posttest measures were each administered over two, 40-minute class periods. Measures were administered blindly by trained researchers who were not involved in leading the weekly experimental or placebo groups. While giving directions to students, researchers followed a prepared manuscript outlining the directions they were to give to each of the four classes participating in the study (see Appendix J). Classroom teachers were not present during the administration of pre- and posttest measures.
Within the same weeks that the students were administered pre- and posttest measures, teachers also completed pre- and posttest ratings of students. These measures were completed at their own convenience.

**Pre-Intervention Activities**

Given that students were randomly assigned to treatment and placebo conditions and had to work with students different from those in their regular classroom, there was a need to establish a sense of community among the students in moral discussion group and nonmoral discussion group conditions. Thus, prior to the commencement of the discussion condition, the students assigned to the MDG and to the NMDG participated in 2 weeks of community-building activities (see Appendix K for sample activities). This followed previous research using the moral dilemma discussion format (e.g., Arbuthnot & Gordon, 1986; Krivel-Zacks, 1995) in which building a sense of community among group members helped students feel comfortable sharing their views and exchanging opinions. Because the remaining two conditions (MRG and NMRG) did not engage in any group discussion, there was no need to incorporate any community-building activities into their respective interventions. As such, while the students in the MDG and NMDG conditions participated in community-building activities, the students in the MRG and NMRG participated in amusing academic tasks (see Appendix L for sample “brain teaser” activities).
Intervention

Students receiving permission to participate in the study were randomly assigned to one of four groups. The four conditions were as follows:

- **Moral dilemma discussion group** (MDG) \( n = 13 \) boys, \( n = 12 \) girls
- **Nonmoral discussion group** (NMDG) \( n = 10 \) boys, \( n = 15 \) girls
- **Moral reflective abstraction group** (MRG) \( n = 13 \) boys, \( n = 10 \) girls
- **Nonmoral reflective abstraction group** (NMRG) \( n = 13 \) boys, \( n = 11 \) girls

Three graduate students, along with the principal researcher, acted as facilitators. All facilitators had previous teaching and research experience with preadolescents and had received extensive training in the cognitive-developmental approach to moral education. Two of the four facilitators were initially assigned to the experimental discussion and placebo groups (MDG and NMDG) while the remaining two facilitators were assigned to the experimental reflection and placebo groups (MRG and NMRG). For each weekly session, each set of facilitators systematically rotated between their assigned treatment and placebo groups as a means of controlling for experimenter bias. Facilitators met with students once a week for 40 minutes (i.e., one class period) for 10 weeks. Each of the four groups met in a separate classroom within the school and followed lessons planned by the principal researcher (see Table 3 for an overview of the study). Student attendance over the course of the ten-week sessions was comparable across the four groups (i.e., 92% to 96%) and was consistent with school-wide attendance rates. The bulk of absences were related to student illness (e.g., sickness, medical appointments).

**Moral discussion group (MDG).** The intervention for students in the MDG consisted of presenting a dilemma to students (see Appendix M for a description of the weekly dilemmas) and having them divide themselves into small groups to discuss a series of probe questions (see Appendix N for a sample discussion dilemma). A variety of probe questions were used to
encourage students to analyze the dilemma from both the “pro” and “con” perspectives. That is, students were encouraged to examine arguments supporting both of the moral choices facing the central character (e.g., “to steal or to not steal”). The format used in the MDG for the present investigation has been outlined by Kohlberg (1975) and Berkowitz (1993) (see Appendix O for discussion format).

Nonmoral discussion group (NMDG). Each of the two experimental groups had a corresponding placebo group. The placebo group for the MDG was comprised of students who participated in a weekly discussion of nonmoral stories (see Appendix P for a sample story). Although it is difficult to absolutely avoid all possible moral issues that may arise when individuals participate in a discussion, certainly when one takes into account that each individual interprets information differently, incorporating varying degrees of morality into his or her interpretation, attempts can nevertheless be made to reduce the moral content of discussions. Taking this into consideration, the participants in the NMDG were presented a nonmoral story (or a story with no prevalent moral themes) and were asked a series of probe questions designed to encourage discussion surrounding the events of the story.

The discussion format of the NMDG followed as closely as possible the discussion format outlined in the MDG condition. In brief, the facilitator presented the story to the group, verified student comprehension, and then provided instructions to the group similar to those given in the MDG regarding the procedure for both large and small group discussion.

Moral reflection group (MRG). Students in the MRG received the same dilemmas as the students in the MDG but were asked to individually respond in writing to probe questions rather than participate in a discussion (see Appendix Q for a sample reflection dilemma). Weekly dilemmas were presented at the same time and in the same order as the dilemmas presented in the MDG. Students in the MRG did not interact with one another and were encouraged to generate
their answers to probe questions in silence. Recall from the review of the literature delineating how reflective abstraction generates cognitive conflict, that cognitive conflict may be generated by exposing individuals to arguments that oppose their views or to inconsistencies in their logic. In an attempt to generate such cognitive conflict, students were asked to read a moral dilemma and respond to probe questions designed to determine their moral judgement (e.g., "What should the central character do?"). Students then handed in their response to this initial probe question thus allowing the group facilitator to ensure that each student was ready to respond to prepared probe questions. Once students had formulated a position, students were then asked to respond to probe questions that presented both pro and con arguments related to the central character's moral action choice. Recall that the MRG was to mirror the MDG as closely as possible and the use of pro/con probe statements was designed to simulate the variety of pro and con comments students were likely to generate by the probe questions used to stimulate discussion in the MDG.

Nonmoral reflection group (NMRG). Students in the placebo group corresponding to the MRG were asked to respond to cognitively challenging (yet nonmoral) vignettes (see Appendix R for a sample vignette). Each vignette contained a puzzling or perplexing scenario that required a solution. Students in this condition followed the same format as students in the MRG. Students were asked to respond in writing to a series of probe questions related to a non-moral, cognitively challenging vignette. For example, students were asked to propose a strategy for building a large snowman without lifting one snowball on top of the other.

Once students had generated a response and had provided reasons supporting their solution, they were asked to hand in their answer sheet to the group facilitator. Once again, this allowed the group facilitator to monitor the progress of individual students by ensuring each student was ready to respond to the prepared arguments that followed. Once initial answers had been verified, the group facilitator then provided each student with arguments that supported an
alternate solution for solving the puzzle. Additionally, students were given a series of probe questions designed to have them compare and contrast their response to the response provided by the group facilitator.

The intent of the NMRG was to mirror, as closely as possible, the MRG yet avoid the encouragement of any reflection of moral issues. Thus, the aim of the NMRG was to generate cognitive conflict by exposing students to arguments and reasoning that contradicted their own within an individual context void of social interaction.

As a means of safeguarding against students generating the same solution as generated by the principal researcher, at least two solutions were generated for each puzzling vignette. This ensured that the facilitator was able to provide students with an alternate and plausible solution to challenge the solution generated by students themselves.

Table 3

Overview of the Study

<table>
<thead>
<tr>
<th>Week</th>
<th>Group</th>
<th>Activity</th>
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</thead>
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<tr>
<td>Prior to Week 1</td>
<td>All Conditions</td>
<td>Administration of pretest moral reasoning and behavior measures</td>
</tr>
<tr>
<td>Weeks 1 &amp; 2</td>
<td>MDG &amp; NMDG</td>
<td>Community Building</td>
</tr>
<tr>
<td></td>
<td>MRG &amp; NMRG</td>
<td>Brain Teasers</td>
</tr>
<tr>
<td>Weeks 3 to 10</td>
<td>MDG</td>
<td>Moral Dilemma Discussions</td>
</tr>
<tr>
<td></td>
<td>NMDG</td>
<td>Story presentation and questions</td>
</tr>
<tr>
<td></td>
<td>MRG</td>
<td>Individual Moral Reflection</td>
</tr>
<tr>
<td></td>
<td>NMRG</td>
<td>Perplexing (nonmoral) stories</td>
</tr>
<tr>
<td>Week 11</td>
<td>All Conditions</td>
<td>Posttest moral reasoning and behavioral measures</td>
</tr>
</tbody>
</table>
RESULTS

Recall that this study had two aims. The first aim was to examine possible differences in moral reasoning between the moral discussion group and the moral reflection group and between these experimental groups and their respective placebo groups. The second aim of the study was to examine the effects of each respective intervention on self-, peer-, and teacher-ratings of prosocial and antisocial behavior.

The results of this study are presented in two sections. First, a description of the preliminary analyses is presented, including results from a series of ANOVAs in which each respective pretest variable was the dependent variable and group membership constituted the independent variable, correlations among all the variables included in this investigation, and summary descriptive statistics. Second, the results of a series of 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVAs are presented. Included in this section are the results of a priori planned comparisons between the MDG and the MRG, the MDG and the NMDG, and the MRG and the NMG. Additionally, effect sizes were calculated for each variable and are thus included in this section.

Preliminary Analyses

Testing of Assumptions

Results from preliminary analyses indicated that the assumptions of normality and homogeneity of variance were met. To test for potential outliers, the data for each variable was converted to z scores and analyzed for univariate outliers. Using the criteria established by Tabachnick and Fidell (1989), an outlier was any z score falling above or below the criterion of 3.67, p = .001. No outlying scores were found across the variables of moral reasoning, self-ratings of behavior, self-ratings of academic competence, peer-nominations of behavior, and teacher-ratings of behavior.
Checking for Randomization

To explore differences among groups on the variables regarding self-, peer-, and teacher-ratings of behavior, I conducted a series of univariate ANOVAs on each distinct construct. As suggested by Hubberty and Morris (1989), a series of multiple ANOVAs rather than a multivariate analysis of variance (MANOVA) is appropriate when the researcher is interested in examining variables that are conceptually distinct. For pretest scores, no significant differences were found among the treatment and placebo groups on moral reasoning, self-ratings of behavior, self-ratings of academic competence, peer-nominations of behavior, or teacher-ratings of behavior.

Intercorrelations Among Pretest Variables

Table 4 shows intercorrelations among all the variables investigated in this study. As can be seen, moral reasoning was found to be positively correlated to self-ratings of prosocial behavior, self-ratings of reading competence, teacher-ratings of assertion, and teacher-ratings of academic competence. Conversely, moral reasoning was found to be negatively correlated to teacher-ratings of internalizing behavior.

Examining the indices that assessed students’ prosocial and antisocial behavior across self-, peer-, and teacher-ratings revealed a number of significant correlations. Self-ratings of emotional instability was found to be negatively correlated to teacher-ratings of cooperation and self-control and positively correlated to teacher-ratings of externalizing behavior and hyperactivity. Not surprisingly, students’ self-ratings of general school ability was found to be positively correlated with teacher-ratings of cooperation, self-control, and academic competence whereas, self-ratings of general school ability was found to be negatively correlated to both teacher-ratings of externalizing behavior and hyperactivity.
Table 4

<table>
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<th>17</th>
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<td>.19</td>
<td>.30**</td>
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<td><strong>-.46</strong></td>
<td>-.04</td>
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<td>.12</td>
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<td><strong>-.38</strong></td>
<td>.09</td>
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<td>.47**</td>
<td><strong>-.36</strong></td>
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<td><strong>.25</strong></td>
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<td><strong>.36</strong></td>
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<td><strong>-.29</strong></td>
<td>.30**</td>
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<td>4. Aggression</td>
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<td>.03</td>
<td>.14</td>
<td>.02</td>
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<td><strong>-.45</strong></td>
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<td><strong>-.34</strong></td>
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</table>

Self-Ratings of Behavior

| 5. Reading | **.21** | **.44** | .00 | .02 | .01 | .07 | .13 | **.39** | **.15** | **-.30** | **.05** | -.18 | .28** |       |       |       |       |       |
| 6. Math | **.60** | .01 | .04 | .05 | .07 | .32** | .11 | .18 | -.04 | **-.11** | -.19 | **.41** |       |       |       |       |       |       |
| 7. General School Peer Nominations | **.37** | **.47** | **.19** | **-.31** | **-.33** | **.47** |       |       |       |       |       |       |       |       |       |       |       |       |
| 8. Sharing | **.77** | **-.52** | **-.51** | -.10 | .01 | -.18 | .14 | **.22** | .16 | -.13 |       |       |       |       |       |       |       |       |       |
| 9. Help | **-.44** | **-.51** | .02 | .00 | -.04 | **.15** | .11 | .10 | .04 |       |       |       |       |       |       |       |       |       |       |
| 10. Starts Fights | **.83** | .09 | .15 | .10 | -.09 | **-.12** | -.11 | .10 |       |       |       |       |       |       |       |       |       |       |       |
| 11. Breaks Rules | -.07 | .15 | .11 | -.16 | -.18 | -.14 | .10 |       |       |       |       |       |       |       |       |       |       |       |

Teacher Ratings

| 12. Cooperation | **.61** | -.18 | **-.55** | **-.77** | **.73** |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 13. Assertion | **-.32** | **-.52** | -.09 | **-.17** | **.24** |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 14. Self-Control | **-.34** | **-.80** | **-.64** | **.44** |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 15. Internalizing | **.35** | **.38** | **.26** |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 16. Externalizing | **-.75** | **-.34** |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 17. Hyperactivity | **-.55** |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| 18. Academic Competence |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |       |

*p < .05. **p < .01
While students' self-ratings of behavior and academic competence proved to be significantly correlated to teacher-ratings of behavior, the correlations between the indices comprising the self-rating scale and peer-nominations of behavior failed to reveal significant associations. The lack of significant correlations between self-ratings and peer-nominations suggests that either the individual scales assessed distinct or unrelated behaviors or that students' own behavioral perception is markedly different than the perceptions of their peers.

Examining the intercorrelations among peer-nominations and teacher-ratings of behavior revealed but one significant relation. Only the variable of peer-nominations of sharing was found to be significantly correlated to teacher-ratings of externalizing behavior. Likely classmates have access to different information than do teachers concerning student behavior.

Summary Statistics

Summary statistics across the treatment and placebo groups are displayed for moral reasoning (Table 5), self-ratings of behavior (Table 6), self-ratings of academic competence (Table 7), peer-nominations of behavior (Table 8), and teacher-ratings of behavior (Table 9). Included in each table are pretest and posttest group means, standard deviations, and cell sizes.

Table 5
Observed Means, Standard Deviations, and Sample Sizes across Treatment and Placebo Groups for Moral Reasoning

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion (n=25)</th>
<th>Placebo Discussion (n=25)</th>
<th>Treatment Reflection (n=23)</th>
<th>Placebo Reflection (n=24)</th>
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<td>Pretest</td>
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Table 6

Observed Means, Standard Deviations, and Sample Sizes across Treatment and Placebo Groups for Self-Ratings of Behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion (n=25)</th>
<th>Placebo Discussion (n=25)</th>
<th>Treatment Reflection (n=23)</th>
<th>Placebo Reflection (n=24)</th>
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<td></td>
<td>M</td>
<td>SD</td>
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<td>SD</td>
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<td>Emotional Instability</td>
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Table 7

Observed Means, Standard Deviations, and Sample Sizes across Treatment and Placebo Groups for Self-Ratings of Academic Competence

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<tr>
<th>Variable</th>
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<th>Placebo Discussion (n=25)</th>
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<td>Placebo Discussion (n=25)</td>
<td>Treatment Reflection (n=23)</td>
<td>Placebo Reflection (n=24)</td>
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<td>Posttest</td>
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<td>Posttest</td>
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<td>Starts Fights</td>
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<td>Posttest</td>
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<td>Posttest</td>
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<td>.28</td>
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<td>.17</td>
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Table 9

Observed Means, Standard Deviations, and Sample Sizes across Treatment and Placebo Groups for Teacher-Ratings of Behavior

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion (n=25)</th>
<th>Placebo Discussion (n=25)</th>
<th>Treatment Reflection (n=23)</th>
<th>Placebo Reflection (n=24)</th>
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<tbody>
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<td>SD</td>
<td>M</td>
<td>SD</td>
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<td>Cooperation</td>
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<td></td>
</tr>
<tr>
<td>Pretest</td>
<td>14.72</td>
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<td>15.68</td>
<td>5.18</td>
</tr>
<tr>
<td>Posttest</td>
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<td>4.80</td>
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<td>5.12</td>
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<td>Assertion</td>
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<td>Pretest</td>
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<td>3.87</td>
<td>10.92</td>
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<td>Posttest</td>
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<td>11.56</td>
<td>4.33</td>
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<td>Self-Control</td>
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<td>15.56</td>
<td>3.72</td>
</tr>
<tr>
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<td>15.72</td>
<td>4.25</td>
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<td>Internalizing</td>
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<td>1.64</td>
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<td>Externalizing</td>
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<tr>
<td>Posttest</td>
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<td>1.64</td>
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<td>Hyperactivity</td>
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<tr>
<td>Pretest</td>
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<td>3.42</td>
<td>2.24</td>
<td>3.57</td>
</tr>
<tr>
<td>Posttest</td>
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<td>1.92</td>
<td>3.13</td>
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<td>Academic Competence</td>
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</tr>
<tr>
<td>Pretest</td>
<td>31.72</td>
<td>8.00</td>
<td>30.08</td>
<td>8.64</td>
</tr>
<tr>
<td>Posttest</td>
<td>32.28</td>
<td>8.45</td>
<td>31.12</td>
<td>8.97</td>
</tr>
</tbody>
</table>

Summary of Preliminary Analyses

The results of preliminary analyses indicate that the random assignment of participants to treatment and placebo groups resulted in groups that were not significantly different at pretest for each of the variables examined in this investigation. Further, no univariate outliers were identified and the assumptions of normality and homogeneity were met. Last, moral reasoning was significantly and positively correlated to self-ratings of prosocial behavior, self-ratings of reading,
teacher-ratings of assertion and academic competence, and negatively correlated to internalizing behaviors.

Overview of Statistical Analyses

The data were analyzed at two different levels. First, a 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVA was used to assess general intervention effects. In these analyses, groups were collapsed across the two dimensions of experimental condition (treatment vs. placebo) and mode (discussion vs. reflection). Recall that participants were randomly assigned to one of four groups. These included a moral dilemma discussion group, a nonmoral discussion group, a moral dilemma reflection group, and a nonmoral reflection group. Although current empirical research points in the direction of no sex differences in moral reasoning, sex was included as a variable to explore the manner in which it interacted with the other variables in the study (Walker, 1984).

The second level of analyses involved conducting preplanned comparisons. Given that specific hypotheses were formulated about the relation between the nature of the intervention (i.e., intraindividual or interindividual) and students' moral reasoning and behavior, a series of planned comparisons were conducted. As is standard practice with planned comparisons, no reference is made to the significance of the omnibus F test. The planned comparison approach, which is recommended whenever hypotheses may be formulated that are more specific than the omnibus null hypotheses (Hertzog & Rovine, 1985), offers distinct advantages over omnibus tests. These advantages include: a) the statistical tests employed are directly linked to the hypotheses of interest, b) it allows for an increase in statistical sensitivity, and c) one avoids mixed model assumptions (Hertzog & Rovine, 1985; Rosenthal & Rosnow, 1988).

Given the principal research question driving this investigation was to examine differences between groups rather than pre- to posttest differences within groups, analysis of covariance was
used over repeated measures analysis of variance. Several researchers argue that when randomization is used and any group differences on pretest means are random, that analysis of covariance is the recommended analysis to examine group differences (Bock, 1975; Maxwell & Delaney, 1990; Schafer, 1992). With respect to the design of the study, care was taken to randomly assign participants to experimental and placebo groups. One distinct advantage to using analysis of covariance is the gain in power stemming from the least squares estimation of slope coefficients (Schafer, 1992).

Three planned comparisons were conducted for each variable to evaluate the effectiveness of the moral reasoning interventions. The first comparison examined the difference between the treatment discussion group and the treatment reflection group. The second comparison examined the difference between the treatment discussion group and the placebo discussion group. The last comparison examined the difference between the treatment reflection group and the placebo reflection group.

Effect size (ES) was also calculated for each preplanned comparison and was calculated using the following strategy. For each measure, the adjusted group means were subtracted and divided by the square root of the mean square error from the ANCOVA (Feldt, personal communication with K. Schonert-Reichl, 1998).

**Intervention Effects**

**Moral Reasoning**

To examine whether the various treatment conditions influenced preadolescent's moral development, a 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVA was performed, using pretest scores as covariates. For moral reasoning, the results yielded a significant main effect for the Experimental condition (moral content versus placebo), $F(1,88) = 6.70, p < .01$ and a significant main effect for Sex, $F(1,88) = 4.09, p < .05$. 
As was anticipated, these results indicated that students who participated in a moral intervention (M = 2.69) had higher posttest moral reasoning scores when compared to students in placebo conditions (M = 2.55). Further, at posttest, girls (M = 2.67) had higher scores on moral reasoning than did boys (M = 2.58). All other main effects and interactions were nonsignificant.

Next, a series of one-way analyses of covariance (ANCOVAs) was performed, using pretest moral reasoning scores as covariates. The adjusted group means are summarized in Table 10. As mentioned, three planned comparisons were conducted. These included examining for differences between adjusted posttest scores between the MDG and the MRG, and examining for differences in each of these groups with their corresponding placebo group.

Analyses revealed no significant differences between the posttest SRM-SF scores of the moral discussion group and the moral reflection group, t (24) = .06, p > .05, ES = .10. However, when the experimental groups were compared to their corresponding placebo groups, significant differences emerged. Specifically, the moral reflection group was significantly different from its corresponding placebo group, t (24) = 2.0, p < .05, ES = .60, just as the moral discussion group differed significantly from its placebo group, t (24) = 1.83, p < .05, ES = .50.

Table 10

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Placebo Discussion</th>
<th>Treatment Reflection</th>
<th>Placebo Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>n</td>
<td>M</td>
</tr>
<tr>
<td>SRMS</td>
<td>25</td>
<td>2.69a</td>
<td>25</td>
<td>2.59b</td>
</tr>
</tbody>
</table>

Note. Means sharing a common subscript do not differ from one another at p < .05.

---

Employing the conventions outlined by Cohen (1977), an ES of .1 - .2 is considered small, an ES of .3 - .4 is considered moderate, and an ES of .5 or greater is considered large.
Self-Ratings of Behavior

To examine whether the various treatment conditions influenced preadolescent's self-ratings of prosocial and antisocial behavior, a series of 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVAs were performed, using pretest scores as covariates. Recall that there were three subscales comprising the self-rating scale for behavior (i.e., Emotional Instability, Prosocial Behavior, Antisocial Behavior). A significant two-way interaction was found for the dimension of Emotional Instability for Experiment (moral content versus placebo) by Sex, $F(1,88) = 4.05, p < .05$. All other main effects and interactions were non-significant. Results revealed that whereas in the experimental group boys ($M = 13.31$) scored higher than girls ($M = 10.62$), in the placebo group boys ($M = 10.66$) scored similarly to girls ($M = 11.30$).

Recall that three preplanned comparisons were conducted (MDG versus MRG, MDG versus NMDG, and MRG versus NMRG). Adjusted group means for self-ratings of behavior are presented in Table 11. No significant differences emerged for any of the comparisons.

Table 11

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Placebo Discussion</th>
<th>Treatment Reflection</th>
<th>Placebo Reflection</th>
</tr>
</thead>
<tbody>
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<td></td>
<td>n  M</td>
<td>n  M</td>
<td>n  M</td>
<td>n  M</td>
</tr>
<tr>
<td>Prosocial Behavior</td>
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<td>25  15.18</td>
<td>23  15.85</td>
<td>24  15.70</td>
</tr>
<tr>
<td>Antisocial Behavior</td>
<td>25  9.48</td>
<td>25  8.45</td>
<td>23  8.98</td>
<td>24  7.53</td>
</tr>
</tbody>
</table>
Self-Ratings of Academic Competence

To examine effects of the interventions on self-ratings of academic competence, a series of 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVAs, with pretest scores as covariates were conducted for each of the indices. Recall that there were three indices comprising the Self-Ratings of Academic Competence Scale (Reading, Math, and General School). No significant main or interaction effects were found in these analyses.

As Table 12 illustrates, no significant findings were found across the three planned comparisons for each of these subscales.

Table 12

Adjusted Mean Scores on Self-Ratings of Academic Competence, with Pretest Scores as Covariates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Placebo Discussion</th>
<th>Treatment Reflection</th>
<th>Placebo Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>M</td>
<td>n</td>
<td>M</td>
</tr>
<tr>
<td>Reading</td>
<td>25</td>
<td>22.83</td>
<td>25</td>
<td>22.68</td>
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<td>General School</td>
<td>25</td>
<td>18.16</td>
<td>25</td>
<td>19.01</td>
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</tbody>
</table>

Peer-Nominations of Behavior

To examine the effects of the interventions on peer-nominations of behavior, a series of 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVAs were performed, using pretest scores as covariates. For the dimension of peer-nominations of Sharing, there was a two-way interaction between Experiment (moral content versus placebo) x Sex, $F (1,88) = 3.31, p < .10$. In the experimental groups, girls ($M = .57$) were nominated as
sharing significantly more often than boys (M = .44) whereas in the placebo groups, girls (M = .46) and boys (M = .46) scored similarly.

For the dimension of Helping, a significant main effect was found for Sex, F (1,88) = 7.93, p < .01, and a significant two-way interaction was found for Experiment (moral content versus placebo) by Sex, F (1,88) = 3.97, p < .05. Girls (M = .45) were seen by their peers as higher on the dimension of helping than were boys (M = .33). The interaction effect between Experiment x Sex revealed that, whereas in the experimental groups girls (M = .51) scored higher than boys (M = .31) on peer-nominations of helping, in the placebo groups girls (M = .38) and boys (M = .46) scored similarly.

For the antisocial dimension of Starts Fights, a significant main effect was found for Sex, F (1,88) = 7.80, p < .01. Boys (M = .21) received higher peer-nominations on the variable of Starts Fights than did girls (M = .08).

A similar profile emerged for the variable of Breaks Rules in which a significant main effect was identified for Sex, F (1,88) = 9.54, p < .01. The results indicated that boys (M = .25) received higher peer-nominations on the variable of Breaks Rules when compared to girls (M = .09).

Next, a series of planned comparisons were conducted, using pretest scores as covariates. The adjusted group means for peer-nominations of prosocial and antisocial behavior are presented in Table 13. The first comparison examined differences between the two experimental conditions (i.e., moral discussion versus moral reflection). No significant differences were found between students in the MDG and the MRG. That is, at posttest, students in both of the experimental groups received similar peer-nominations of prosocial and antisocial behavior.
Table 13

Adjusted Mean Scores on Peer-Nominations of Behavior With Pretest Scores as Covariates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Placebo Discussion</th>
<th>Treatment Reflection</th>
<th>Placebo Reflection</th>
</tr>
</thead>
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<td>n</td>
<td>M</td>
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<td><strong>Prosocial Behaviors</strong></td>
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<td>.503</td>
</tr>
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<td>.381</td>
<td>25</td>
<td>.379</td>
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<tr>
<td><strong>Antisocial Behaviors</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Fighting</td>
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<td>.134</td>
<td>25</td>
<td>.108</td>
</tr>
<tr>
<td>Breaking Rules</td>
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<td>.150</td>
<td>25</td>
<td>.126</td>
</tr>
</tbody>
</table>

Note. Means sharing a common subscript differ from one another at p < .10.

The second comparison involved examining each experimental group and its corresponding placebo group. With respect to the peer-nominations of behavior, an interesting profile emerged for students in the MRG when compared to students in the NMRG. Students in the MRG who had individually reflected on issues prevalent within moral dilemmas had higher ratings on the prosocial dimension of Helping when compared to students in the NMRG, $t(24) = 1.28, p < .10, ES = .34$. Similar findings emerged for students in the MRG for the dimension of Sharing when compared to students in the NMRG, $t(24) = 1.63, p < .10, ES = .40$.

With respect to peer-nominations of antisocial behavior, the results of a one-way analysis of covariance revealed that the students in the MRG were characterized by a different behavioral profile when compared to their counterparts in the NMRG. For the dimension of Fighting, students in the MRG had lower peer-nominations than did students in the NMRG, $t(24) = 1.64, p < .10, ES = .39$. Consistent with this finding was the profile that emerged for students on the
dimension of Breaks Rules. Students in the MRG had significantly lower peer-nominations than did their counterparts in the NMRG, $t(24) = 1.80, p < .10$, ES = .34.

**Teacher-Ratings of Behavior**

Recall that there were seven distinct indices comprising the teacher-ratings of student behavior. These included indices of Cooperation, Assertion, Self-Control, Externalizing Problems, Internalizing Problems, Hyperactivity, and Academic Competence.

To examine the effects of the interventions on the teacher-ratings of student behavior, a series of 2 (experimental versus placebo) x 2 (discussion versus individual reflection) x 2 (Sex) ANCOVAs were performed, using pretest scores as covariates. For the dimension of Cooperation, a significant three-way interaction was found for Experiment (moral content versus placebo) x Mode (discussion versus individual reflection) x Sex, $F(1,88) = 4.08, p < .05$. Boys ($M = 16.29$) who discussed moral dilemmas received higher ratings by teachers on the dimension of Cooperation than did girls ($M = 14.82$) who discussed moral dilemmas. Further, boys ($M = 15.66$) who individually reflected on moral dilemmas had higher teacher-ratings of Cooperation than did girls ($M = 13.88$) who individually reflected on moral dilemmas.

A significant three-way interaction (Experimental x Mode x Sex) was also found for the dimension of Hyperactivity, $F(1,88) = 6.34, p < .01$. The results indicated that boys ($M = 1.07$) who discussed moral dilemmas had lower teacher-ratings of hyperactivity than did girls ($M = 1.97$), whereas boys ($M = 2.42$) who discussed nonmoral stories had higher teacher-ratings of hyperactivity than did girls ($M = 2.13$) who discussed nonmoral stories. A different pattern emerged for students in the individual reflection groups. Boys ($M = 2.82$) who individually reflected on moral dilemmas had higher teacher-ratings of hyperactivity than did girls ($M = 1.55$) whereas, boys ($M = 1.69$) had lower teacher-ratings of hyperactivity when they individually
reflected on nonmoral stories than did girls (M = 2.72) who individually reflected on nonmoral stories.

For the remaining indices comprising the teacher-rating scale (i.e., Assertion, Self-Control, Externalizing Behaviors, Internalizing Behaviors, and Academic Competence), no other significant main effect or interactions were found.

Next, a series of one-way analyses of covariance (ANCOVAs) was performed, using pretest moral reasoning scores as covariates. The adjusted group means for the posttest scores of teacher-ratings of behavior are presented in Table 14. Recall that the teacher-ratings of behavior were comprised of three distinct dimensions or subscales. These included: Social Skills (Cooperation, Assertion, and Self-Control), Problem Behaviors (Externalizing, Internalizing, and Hyperactivity), and Academic Competence. Three preplanned comparisons were conducted. These included comparing the MDG to the MRG, the MDG to the NMDG, and the MRG to the NMRG.

Across the seven indices that assessed teacher-ratings of student behavior, significant differences were found only for the dimension of Hyperactivity. With respect to Hyperactivity, the findings revealed that students in the MRG had posttest scores that differed significantly from students in the MDG, t (24) = 2.88, p < .10, ES =.52. No other significant differences were found across the dimensions of Cooperation, Assertion, Self-Control, Externalizing Behaviors, Internalizing Behaviors, or Academic Competence.
Table 14

Adjusted Mean Scores on Teacher-Ratings of Behavior With Pretest Scores as Covariates

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Placebo Discussion</th>
<th>Treatment Reflection</th>
<th>Placebo Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>M</td>
<td>n</td>
<td>M</td>
</tr>
<tr>
<td>Prosocial Behaviors</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Control</td>
<td>25</td>
<td>15.26</td>
<td>25</td>
<td>15.48</td>
</tr>
<tr>
<td>Cooperation</td>
<td>25</td>
<td>15.51</td>
<td>25</td>
<td>15.27</td>
</tr>
<tr>
<td>Antisocial Behaviors</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td>25</td>
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<td>1.81</td>
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<td>2.29</td>
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<td>2.02</td>
</tr>
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<td>Hyperactivity</td>
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<td>1.53</td>
<td>25</td>
<td>2.23</td>
</tr>
<tr>
<td>Academic Competence</td>
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<td></td>
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<td>32.03</td>
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<td>32.37</td>
</tr>
</tbody>
</table>

Note. Means sharing a common subscript differ from one another at p < .10.

Summary of Intervention Effects

Analyses conducted using a priori planned comparisons, revealed a number of significant results. First and foremost, no significant posttest differences were found between the moral discussion and the moral reflection treatment groups. Second, the moral discussion and moral reflection groups were significantly different from their respective placebo groups. Taken together, these results revealed that both encouraging preadolescents to discuss moral dilemmas or reflect upon moral dilemmas were effective means of fostering moral growth. With respect to moral reasoning and its impact on student behavior, the results indicated that students who individually reflected on moral dilemmas had higher peer-nominations of prosocial behavior and lower peer-nominations of antisocial behavior than students who individually reflected on
nonmoral stories. Additionally, the results revealed that teachers perceived students in the moral reflection group as more hyperactive than students in the nonmoral reflection group.

Pre- to Posttest Gains in Moral Reasoning

Table 15 indicates the pre- to posttest changes in moral reasoning across experimental and placebo groups. Both treatment groups experienced larger gains from pre- to posttest than did the placebo groups.

Table 15

Pre- to Posttest Gains in Moral Reasoning Scores

<table>
<thead>
<tr>
<th>Group</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>n</td>
</tr>
<tr>
<td>Moral Discussion Group</td>
<td>2.51</td>
<td>.23</td>
<td>25</td>
</tr>
<tr>
<td>Nonmoral Discussion Group</td>
<td>2.42</td>
<td>.30</td>
<td>25</td>
</tr>
<tr>
<td>Moral Reflection Group</td>
<td>2.46</td>
<td>.32</td>
<td>24</td>
</tr>
<tr>
<td>Nonmoral Reflection Group</td>
<td>2.42</td>
<td>.30</td>
<td>23</td>
</tr>
</tbody>
</table>

Effect Sizes Pre- to Posttest

In order to determine the magnitude of pre- to posttest gains across experimental and placebo groups, effect size was determined for each variable (see Table 16). Moderate to large effect sizes were found for moral reasoning and for several of the behavioral indices examined in this investigation.
Table 16

<table>
<thead>
<tr>
<th>Variable</th>
<th>Treatment Discussion</th>
<th>Effect Size</th>
<th>Placebo Discussion</th>
<th>Reflection Discussion</th>
<th>Placebo Reflection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moral Reasoning</strong></td>
<td>.90</td>
<td>.70</td>
<td>.60</td>
<td>.36</td>
<td></td>
</tr>
<tr>
<td><strong>Self-Ratings of Behavior</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional Instability</td>
<td>.15</td>
<td>.00</td>
<td>.01</td>
<td>.17</td>
<td></td>
</tr>
<tr>
<td>Prosocial Behavior</td>
<td>.33</td>
<td>.47</td>
<td>.26</td>
<td>.27</td>
<td></td>
</tr>
<tr>
<td>Aggression</td>
<td>.12</td>
<td>.00</td>
<td>.06</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td><strong>Self-Ratings of Academic</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Competence</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td>.06</td>
<td>.12</td>
<td>.05</td>
<td>.14</td>
<td></td>
</tr>
<tr>
<td>Math</td>
<td>.12</td>
<td>.05</td>
<td>.05</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>General School</td>
<td>.03</td>
<td>.03</td>
<td>.11</td>
<td>.03</td>
<td></td>
</tr>
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<td><strong>Peer-Nominations</strong></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>Sharing</td>
<td>.22</td>
<td>.16</td>
<td>.13</td>
<td>.29</td>
<td></td>
</tr>
<tr>
<td>Helping</td>
<td>.16</td>
<td>.19</td>
<td>.10</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td>Starts Fights</td>
<td>.09</td>
<td>.19</td>
<td>.24</td>
<td>.08</td>
<td></td>
</tr>
<tr>
<td>Breaks Rules</td>
<td>.07</td>
<td>.19</td>
<td>.00</td>
<td>.19</td>
<td></td>
</tr>
<tr>
<td><strong>Teacher-Ratings</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperation</td>
<td>.14</td>
<td>.25</td>
<td>.06</td>
<td>.01</td>
<td></td>
</tr>
<tr>
<td>Assertion</td>
<td>.09</td>
<td>.14</td>
<td>.16</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>Self-Control</td>
<td>.02</td>
<td>.13</td>
<td>.04</td>
<td>.09</td>
<td></td>
</tr>
<tr>
<td>Internalizing</td>
<td>.12</td>
<td>.15</td>
<td>.14</td>
<td>.15</td>
<td></td>
</tr>
<tr>
<td>Externalizing</td>
<td>.07</td>
<td>.15</td>
<td>.04</td>
<td>.18</td>
<td></td>
</tr>
<tr>
<td>Hyperactivity</td>
<td>.35</td>
<td>.11</td>
<td>.10</td>
<td>.16</td>
<td></td>
</tr>
<tr>
<td>Academic Competence</td>
<td>.07</td>
<td>.05</td>
<td>.12</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

**Moral Reasoning**

Consistent with previous research that has determined the effect sizes of moral interventions (i.e., Schlaefli, Rest, & Thoma, 1985), effect size was determined by calculating the difference between mean posttest and pretest scores divided by their pooled standard deviations. Using the guidelines outlined by Cohen (1977), an effect size of .3 - .4 is considered moderate while an effect size of .5 or greater is considered large.
Behavior and Academic Competence

Self-ratings of behavior. Moderate effect sizes were found for students across all groups for the dimension of Prosocial Behavior. All other effect sizes across the remaining indices comprising the self-rating scale were less than moderate.

Self-ratings of academic competence. The effect sizes across the three indices of Reading, Math, and General School were low.

Peer-nominations of behavior. The effect size for Sharing for students in the moral discussion group and nonmoral reflection group was low. Additionally, the effect size for students in the nonmoral discussion group was low. All other effect sizes across the indices comprising the peer-nomination scale were in the low range.

Teacher-ratings of behavior. With the exception of students in the moral discussion group who had a moderate effect size on the dimension of hyperactivity, all other effect sizes for teacher-ratings of behavior were in the low range.

Summary of Findings

The first aim of this study was to examine the efficacy of two distinct moral reasoning interventions: one, a socially-based intervention in which students regularly discussed moral dilemmas, and the other, an individual intervention in which students reflected on moral dilemmas without participating in any discussion. This study found both moral discussions and individual moral reflection to be effective means through which moral development could be facilitated. Further, the results found that students who individually reflected on the issues prevalent within moral dilemmas experienced comparable increases in their moral reasoning when compared to students who participated in peer-based discussions of moral dilemmas.

A second aim of this study was to examine how the discussion and reflection of moral dilemmas impacted the prosocial and antisocial behavior of preadolescents. While the results
revealed no differences in self-ratings of behavior or in self-ratings of academic competence, the results revealed that students who discussed dilemmas and those who reflected on dilemmas were characterized by comparable peer-nominations of behavior. When treatment groups were compared to their corresponding placebo groups however, students who individually reflected on moral dilemmas were perceived by their classmates as more prosocial (i.e., higher on the dimensions of helping and sharing) than were students in the placebo reflection group. Additionally, students who individually reflected on moral dilemmas were perceived by their classmates as less antisocial (i.e., lower on the dimensions of fighting and breaking rules) than were students in the placebo reflection group. The last significant behavioral finding emerged from the teacher-ratings of student behavior. Teachers perceived students who individually reflected on moral dilemmas as more hyperactive than their counterparts who individually reflected on nonmoral issues. The implications of these findings are discussed next.
DISCUSSION

This study originated from the desire to better understand how moral reasoning is facilitated. This investigation challenged conventional thinking about how to best facilitate moral reasoning in the public school classroom. Traditionally, moral reasoning interventions have been based largely on social interaction (e.g., Blatt & Kohlberg, 1975; Damon & Killen, 1982; Hann, 1985; Santilli & Hudson, 1992). That is, in these studies, students have been encouraged to perspective-take and discuss their views and opinions concerning moral issues with their peers. Certainly, the role of peers in facilitating moral growth has been the cornerstone of both Piagetian (1932/1965) and Kohlbergian (1969) moral theory.

As a means of demonstrating whether or not moral reasoning could be fostered in a different, less socially-constructed manner, an intervention was designed in which reflective abstraction served as the mechanism of development. In a context void of social interaction, students were encouraged to individually reflect on moral issues by responding, in writing, to a series of probe questions. The role of reflective abstraction has received little, if any, attention in the moral reasoning literature and, as such, a study of this nature held the potential to contribute to the field of moral reasoning from both theoretical and practical perspectives.

Recall that this study attempted to find answers to two empirical questions: could moral reasoning be facilitated intraindividually through reflective abstraction?; and, how did changes in moral reasoning influence the classroom-related behaviors of preadolescents? The discussion of the results begins with answers to the aforementioned questions with particular emphasis on how the findings are situated within the larger context of moral reasoning literature, a review of the strengths and weaknesses of the study, an overview of the educational significance of the findings, and an overview of future research directions that the findings of this study may generate.
Moral Reasoning and Cognitive Conflict

Recall that there were two distinct treatment conditions in this study: an interindividual condition in which students discussed moral dilemmas and, an intraindividual condition in which students individually reflected on the issues prevalent within moral dilemmas. The principal aim of this study was to examine the efficacy of these two treatments with specific interest in whether or not an intraindividual approach to moral reasoning versus a traditional peer-discussion approach would be an effective means of facilitating moral reasoning in preadolescents.

The findings support this hypothesis. Preadolescents who individually reflected on moral dilemmas did indeed experience a significant increase in their pre- to posttest moral reasoning scores when compared to preadolescents in a placebo condition. Further, preadolescents who individually reflected on moral dilemmas achieved comparable gains in moral reasoning when compared to preadolescents who discussed moral dilemmas. Thus, having preadolescents individually reflect on the issues prevalent within dilemmas was a viable means of fostering their moral growth. It is not surprising that the MDG and the MRG did not differ significantly given that participants in both groups experienced opportunities to experience cognitive conflict. Recall from the literature review that intraindividual conflict is the primary mechanism facilitating moral growth whether it is fostered in a social or individual setting (Chapman & McBride, 1992).

From a theoretical perspective, this finding challenges the prevailing moral developmental theory proposed by Kohlberg (1969), Piaget (1932/1965) and others (e.g., Youniss, 1980), who hold that peers play a critical role in creating the cognitive conflict necessary to stimulate moral reasoning. Although this study does confirm that socially-derived cognitive conflict is an effective means through which moral reasoning may be facilitated, the findings also demonstrate that it is not the only means. Facilitating moral growth appears not to be as peer-dependent as has been previously argued.
Certainly, the findings of this study serve to validate the role that reflective abstraction plays in creating cognitive conflict, the mechanism responsible for facilitating moral growth. Revisiting Piaget's original definition of reflective abstraction, recall that Piaget posited that reflective abstraction occurred when an individual reflected on a stimulus in his or her environment (Ginsburg & Opper, 1979). Thus, the moral dilemmas served as the stimuli and the associated probe questions encouraged individual reflection of the moral issues prevalent within the dilemmas.

While comparison of the current findings to previous research examining the efficacy of reflective abstraction in the promotion of moral reasoning is limited given the paucity of research examining the effect of reflective abstraction on moral development, it is nevertheless possible to place the findings of the current investigation within the larger body of research examining the role of individual reflection regarding the realms of individual reflectivity, cognitive, and legal reasoning.

For instance, in a recent study by Lopez and Lopez (1998) that examined the influence of individual reflection training on moral reasoning, adolescents were encouraged to develop individual reflection strategies (e.g., anticipation of consequences, problem-solving by using internal self-speech, time for reflection prior to problem solving). Findings revealed that students in the experimental group – those students who were given opportunities to develop individual reflection strategies – experienced significantly greater gains in moral reasoning than students in a control group. It merits noting that the intervention that these authors employed to increase the moral reasoning of students contained no moral content. That is, students did not individually reflect on moral dilemmas, rather, they were encouraged to develop requisite skills for moral thinking.
Because Lopez and Lopez (1998) used adult trainers to facilitate reflectivity in students (via direct instruction), the methodology these researchers employed may not be considered entirely intraindividual in nature. Nonetheless, these authors did attempt to increase reflectivity as a means of promoting the moral reasoning of students. The findings of the current study simultaneously support and refute the findings presented by Lopez and Lopez. Recall from the present investigation that students in the nonmoral reflection group were encouraged to individually reflect on the issues found within nonmoral, cognitively challenging vignettes. According to the findings of Lopez and Lopez, this opportunity to increase reflectivity skills in students should have had a positive influence on students’ moral reasoning. Such was not the case. Whereas students in the moral reflection group did experience significant increases in their pre- to posttest moral reasoning scores, students in the placebo reflection condition failed to experience comparable gains in moral reasoning.

The findings of the current investigation support previous research examining the role of individual reflection in promoting cognitive development (e.g., Dimant & Bearison, 1991) and legal reasoning (e.g., Roy & Howe, 1990). In two separate studies conducted by Dimant and Bearison and Roy and Howe, these researchers found that students in conditions that promoted individual reflection performed as well as students in socially-orchestrated interventions. Recall from the review of these studies reported in the literature review that Dimant and Bearison demonstrated how reflective abstraction could be used to promote cognitive development and that Roy and Howe demonstrated how reflective abstraction could be used to facilitate legal reasoning. The findings from the present investigation are in concert with the findings of Dimant and Bearison and Roy and Howe. That is, although the findings of the current study support the notion that social interaction is a viable means of fostering cognitive conflict, it is not the only means through which cognitive conflict may be generated. Further, the current findings suggest
that students participating in a socially-based intervention do not outperform students in individual, reflective intervention conditions.

A key factor in determining the success of any intraindividual intervention is the extent to which the participants are encouraged to participate in individual reflection. For the purposes of the present investigation, it is important to note the key role the probe questions played in encouraging the students to reflect beyond the surface level of the dilemmas and to examine the dilemmas from a variety of viewpoints supporting both pro and con arguments. Certainly, the findings appear to support the role afforded cognitive conflict as posited by Damon and Killen (1982). These authors have argued that it is not the confrontational nature of moral dilemma discussions that create cognitive conflict but rather the opportunity to perspective-take and consider a variety of viewpoints concerning moral issues found within the dilemmas that generates cognitive dissonance. Recall that students in the MRG were asked to respond to a series of probe questions that encouraged analysis of the dilemma from a variety of perspectives (e.g., “Should the father not ask Joe for the money because he is causing Joe to lose faith in him or in their relationship?”). The probe questions were intended to have students reflect upon the issues within the dilemmas from perspectives other than their own. That is, by having students examine the dilemma from different perspectives, they were likely to confront reasoning that countered their own logic. Thus, the probe questions served a vital role in stimulating reflection within students. This reflection would, in turn, lead students to experience cognitive conflict, the requisite mechanism for moral growth.

In addition to encouraging the students to analyze the dilemma from both pro and con viewpoints, the probe questions also facilitated development by presenting arguments that were intended to be more sophisticated (i.e., +1) than the individual’s current reasoning. Specifically, a variety of questions representing the different stages (e.g., stages 1-5) were incorporated into the
probe questions. Thus, it was highly probable that students would be exposed to statements representing reasoning more sophisticated than their own. This methodological consideration was consistent with previous research examining the role that +1 stage reasoning plays in facilitating moral growth (e.g., Walker, 1983).

Moral Reasoning and Classroom Behavior

A secondary aim of this study was to examine the influence of two distinct moral reasoning interventions on the self-, peer-, and teacher-ratings of students' prosocial and antisocial behavior. Recall from the review of the literature that there exists considerable support for the hypothesis that moral reasoning is linked to behavior. Specifically, the findings from previous research offer some support for the claim that moral reasoning and behavior are monotonically associated (Bear, 1989; Blasi, 1980). That is, as moral reasoning increases, prosocial behavior increases and antisocial behavior decreases. The findings from the current study offer varying degrees of support for this claim.

Recall that, to this author's knowledge, no empirical study has previously examined the effects of inter- and intraindividually-based moral reasoning interventions on self-, peer-, and teacher-ratings of classroom behavior. Prior to this study, research examining the link between moral reasoning and behavior has looked almost exclusively at teacher-ratings of antisocial behavior, with a small body of work examining both teacher- and peer-ratings of behavior (e.g., Krivel-Zacks, 1995; Schonert-Reichl, 1999). Thus, this study builds upon and extends the methodologies employed by previous researchers in two important ways. First, measures of both prosocial and antisocial behavior were incorporated within the study, and second, information concerning student behavior was gathered not only from teacher-ratings but also from self- and peer-ratings. Certainly one advantage of this multi-method approach to data collection was that it
allowed for the examination of the influence of moral reasoning on self-, peer-, and teacher-perceptions of behavior. The results of each of these is reported next.

Given no significant behavioral self-ratings emerged for students in either of the treatment conditions, it may be that students' perception of their behavior was slow to change and that self-perceptions of behavior were less malleable to change than were teacher- or peer- perceptions. That is, students may fail to see themselves changing to the extent that others are able to perceive changes in their behavior.

Although self-ratings failed to reveal significant differences in students' behavioral ratings, peer- and teacher-ratings told a different story. It merits noting that the profile that emerged from peer- versus teacher-ratings of student behavior provided different perspectives of student conduct. In fact, the zero-order correlations between peer- and teacher-ratings of student behavior (i.e., on the indices of “sharing,” “helping,” “fighting,” and “breaking rules”) were low ranging from .01 to .22. This is perhaps not surprising given the moderate correlation that exists between peer- and teacher-ratings of behavior. For example, Dodge, Pettit, McClaskey, and Brown (1986) report a correlation between peer- and teacher-ratings of .57. The discrepancy between peer- and teacher-ratings of behavior may be a function of how perceptive individual teachers were to student behaviors. Teacher “withitness” has been defined as the extent to which teachers are aware of events in the classroom (Brooks, 1985). Recall that four teachers provided ratings of student behavior. It could very well be that the lack of congruence between the peer- and teacher-ratings of behavior reflects the extent to which individual teachers possessed teacher “withitness.” The discrepancy between peer- and teacher-ratings of behavior may also be explained, in part, by the measures used to assess student behavior. The peer and teacher measures assessed conceptually distinct yet related indices of student behavior. That is, peers
assessed different dimensions of prosocial and antisocial behavior (e.g., Sharing, Fighting) than were assessed by teachers (e.g., Assertion, Externalizing Behaviors).

With respect to the behavioral findings that arose from peer-nominations of behavior, an interesting profile emerged for students in the moral reflection group. Students who individually reflected on moral dilemmas emerged with a markedly different behavioral profile with respect to the perceptions of their peers than did students who individually reflected on the issues prevalent in nonmoral stories. More specifically, individually reflecting on moral dilemmas appeared to positively influence students' prosocial behavior and negatively influence students' antisocial behavior. At posttest, students in the MRG were seen by their peers as higher on the prosocial dimensions of Helping and Sharing, and lower on the antisocial dimensions of Fighting and Breaking Rules than were their counterparts in the NMRG.

These findings are in concert with the findings of other researchers who have found a positive relation between moral reasoning and peer-nominations of prosocial behavior (e.g., Krivel-Zacks, 1995; Schonert-Reichl, 1999). Krivel-Zacks, for example, found that the peer-nominations of students who participated in weekly moral dilemma discussions were higher on the prosocial dimensions of “helping,” “sharing,” and “cooperating,” and lower on the antisocial dimensions of “starts fights,” breaks rules,” and “does things they are not supposed to do” than were the peer-nominations of students in a placebo group. The findings of Schonert-Reichl (1999) further support the empirical link between moral reasoning and peer acceptance. The work of Schonert-Reichl has demonstrated that preadolescent girls characterized by high moral reasoning tend to have corresponding high prosocial peer-nominations, whereas preadolescent boys with high moral reasoning are rated by their peers as high in both prosocial and antisocial behaviors.
It merits noting that while different behavioral profiles from peer-nominations emerged between students who reflected on moral dilemmas versus students who reflected on nonmoral stories, no differences were found between students who discussed moral dilemmas and students who discussed nonmoral stories. This finding is not entirely surprising. Recall from the descriptions outlined in the method section, that students in the placebo discussion condition were encouraged to share and exchange ideas, and work cooperatively and collaboratively in finding solutions to common goals. Given that students in the MDG and NMDG participated in weekly activities that required highly similar cooperative behaviors, it is not surprising that they would receive comparable behavioral profiles from peer-nominations. Recognize also that students in both of these conditions began the study by participating in community-building activities. Certainly, activities of this nature encouraged and promoted the prosocial concepts of sharing, cooperating, and helping.

In addition to self-ratings and peer-nominations, information about students' behavior was also collected from teachers. Of the seven indices comprising the teacher-rating scale, only posttest scores for the dimension of Hyperactivity proved to be significant for students in the moral reflection versus moral discussion group. The lack of significant findings across the remaining six indices comprising the teacher-rating scale may be due to the extent to which individual teachers had access to, and were able to witness, students' prosocial and antisocial behavior. Recall that there were four different teachers that completed student behavioral assessments. Perhaps teachers varied in their ability to tap into and recognize changes in students prosocial and antisocial behavior.

What is particularly interesting about the significant finding for teacher-ratings of hyperactivity, is that students who were presented with moral dilemmas and asked to individually reflect on the issues contained within the dilemmas were perceived by their teachers as more
hyperactive than were students who were allowed to discuss and express their views concerning these same issues. While the effect of individual reflection on hyperactivity requires further study, it could be that having students individually reflect on controversial moral issues contributes to students experiencing a heightened sense of agitation. This may be further compounded by the fact that students in the moral reflection group were only allowed to express their views via writing rather than talking. When students are given controversial issues to reflect upon, it may be important to provide an avenue or outlet for students to discuss and express their views above and beyond the expression afforded them via written responses.

While significant differences in pre- to posttest moral reasoning were identified only for teacher-ratings of Hyperactivity for students in the MRG, correlational findings between moral reasoning and teacher-ratings further contributed to better understanding how moral reasoning is linked to behavior. Recall that moral reasoning proved to be positively correlated to teacher-ratings of Assertion and Academic Competence and negatively correlated to teacher-ratings of Internalizing Problem Behavior. These correlational findings are in accord with the findings of Bear and others (1989; Bear & Richards, 1981; Krivel-Zacks, 1995) who have identified a positive relation between moral reasoning and teacher-ratings of prosocial behavior and a negative relation between moral reasoning and antisocial or delinquent behavior.

The lack of marked behavioral changes as noted by self-, peer-, and teacher-ratings of behavior, may, in part, be due to the nature of the changes in moral reasoning that students experienced. Recall that students' moral reasoning changed horizontally (i.e., within stage two) rather than vertically (i.e., across stages or from one stage to another). Many researchers have posited that moral reasoning and behavior are monotonically associated (e.g., Arbuthnot & Gordon, 1986; Bear, 1989; Blasi, 1980). That is, as the moral reasoning of students increases, there are corresponding decreases in antisocial behavior. In opposition to this view, Richards,
Bear, Stewart, and Norman (1992) as well as Niles (1986) have argued that different stages of moral reasoning may be characterized by different behavior. Lickona (1983), for example, has described the behavior of children at stage one as the “spirit of accommodation,” stage two as “feisty independence,” and stage three as “caring about others.” Thus, according to these authors, students at stage two are characterized by behavior that is oppositional in nature.

The work of Richards et al. (1992) and Niles (1986) has supported Lickona’s description of stage two behavior. Richards et al., in a study examining the relation between moral reasoning and classroom behavior in fourth and eighth grade students, found a curvilinear relation between moral reasoning and behavior. These authors argue that low (i.e., stage 1 and 1[2]) and high (i.e., stages 3 and 4) reasoners had fewer conduct problems than did students whose moral reasoning was at stage two. That is, students within stage two were found to have more conduct problems (i.e., more antisocial behavior) than their counterparts in stages one and three. The findings of Richards et al. offer a plausible explanation for the lack of marked behavioral changes found in the present investigation for students across self-, peer-, and teacher-ratings. According to this model, one would expect students characterized primarily by stage two reasoning at both pre- and posttest, to experience few behavioral changes as a result of the intervention. Had the participants in this study experienced vertical changes from stage two to stage three, perhaps more marked behavioral changes would have been identified through the self-, peer-, and teacher-ratings.

Nevertheless, the findings highlighted above serve to further establish the empirical link between moral reasoning and behavior and contribute theoretically to the body of literature examining these two variables. Recall from the review of the literature that, with the exception of two studies (cf. Krivel-Zacks, 1995; Schonert-Reichl, 1999), the vast majority of studies examining moral reasoning and behavior assessed antisocial behavior and failed to collect data
about student behavior from sources other than classroom teachers. Given this, the findings of
this study advance the understanding of the role moral reasoning plays in promoting prosocial
behavior and decreasing antisocial behavior.

The design and findings of the current investigation may also be viewed within the
framework of other intervention studies that have attempted to promote prosocial behavior (e.g.,
Battistich, Schaps, Watson, & Solomon, 1996; Battistich, Solomon, Watson, Solomon, & Schaps,
1989; Solomon, Battistich, Kim & Watson, 1997). Battistich, Solomon, Watson, Solomon, and
Schaps (1989), in their longitudinal study of student prosocial behavior, identified a number of
characteristics necessary for school-based, behavioral interventions with children, including
cooperative activities, developmental discipline, activities promoting social understanding,
highlighting prosocial values, and helping activities.

Lewis, Battistich, and Schaps (1990) further identified the criteria for effective school-
based, behavioral programs and identified a number of traits that characterize effective programs.
According to these authors, effective programs should: be clearly derived from theoretical
models, strive to influence general school climate (versus individual student behavior), focus on
positive influences to social development (rather than counteracting negative influences), be
incorporated within regular school curriculum, take a proactive rather than reactive approach to
changing behavior, and be carefully monitored throughout the implementation process. With the
exception of the second criterion (i.e., addressing school climate), the methodology of the current
study clearly adhered to the criteria characterizing effective school-based interventions.

While Lewis et al. (1990) examined general characteristics of effective school-based
interventions, other researchers have described the characteristics of teaching practices that are
effective in fostering prosocial student behavior. Building upon this work, Solomon, Battistich,
Kim, and Watson (1997) have examined factors that contribute to a positive school climate or a
sense of school community, a necessary prerequisite to promoting prosocial behavior in students. These authors posited that a linear relation exists among teacher practices, student behavior, and sense of school community. That is, teaching impacts student behavior and together, these two factors create a sense of school community or climate: According to Solomon et al. (1997), in order to promote student prosocial behavior, teachers should be characterized by the following: a warm and supportive teaching style, place an emphasis on prosocial values, and incorporate encouragement and cooperation.

Surprisingly, these authors found that eliciting student thinking and expression of ideas was negatively related to promoting prosocial behavior in students. The authors posit that questioning of this nature moves the focus from positive interactions between students (e.g., helping one another, being pleasant to one another) to a focus on the content of discussions. While this may explain why teacher-ratings failed to identify significant changes in students' prosocial behavior, it fails to support the findings stemming from peer nominations, especially for students who individually reflected on moral dilemmas.

With respect to the characteristics of effective teaching practices in the present study, the group facilitators of the MDG and the NMDG encouraged students to cooperate, placed emphasis on prosocial values, and were characterized by a warm and supportive teaching style. Given the nature of the MRG and the NMRG, a similar environment was not possible in these conditions as students were not allowed to speak to one another and worked individually rather than cooperatively. The lack of stark behavioral changes in the current investigation may, in part, be a function of the focus placed on the discussion and reflection of ideas surrounding topics found within the moral dilemmas and stories. As Solomon et al., (1997) posit, perhaps this focus on content worked in opposition to the development of prosocial behavior in students.
Taken together, the characteristics of effective school-based programs and of effective teaching practices for the promotion of prosocial behavior in students may be used as guidelines to support the claim that the interventions used within the current investigation were well-grounded in both theoretically and pedagogically sound practice. To summarize, the design of the current study was compatible with the standards for effective school-based interventions promoting prosocial behavior as outlined by Battistich et al. (1989) and Solomon et al. (1997), however the role of eliciting students thinking and the expression of their ideas and its impact on moral reasoning and student prosocial behavior requires further empirical investigation.

Moral Reasoning and Academic Achievement

Recall that the relation between moral reasoning and academic achievement was measured through both self-ratings of Reading, Math, and General School and through teacher-ratings of Academic Competence. While changes in moral reasoning did not result in significant posttest changes in these variables, moral reasoning was, nevertheless, positively correlated to both self-ratings of Reading ability and to teacher-ratings of overall Academic Competence at pretest. Both of these indices, Reading and Academic Competence, may be considered proxies for intelligence. Considered within this framework, these findings are in accord with findings reported elsewhere in moral reasoning literature. While Kohlberg (1969) reported correlations between Moral Judgment Interview scores and IQ to be between .30 and .50, in a study conducted by Gibbs and Lieberman (1990), correlations between scores from Kohlberg's Moral Judgment Interview and IQ were more conservative and ranged from .17 to .27 during childhood and adolescence. Rest (1986) has examined the correlations between scores from the Defining Issues Test and IQ and has reported comparable findings, the bulk of which range from .20 to .50. The findings from the current study are in concert with these findings. The correlation between moral reasoning and Reading was .29 and moral reasoning and teacher-ratings of Academic
Competence was .39. Thus, the association between moral reasoning and intelligence for the present investigation may be considered moderate. This supports the claim that students who tend to be academically inclined, and who do well at school, tend to have higher moral development scores.

Strengths and Limitations of the Study

It is important to recognize how the methodology of this study was designed to address (a priori) several potential experimental confounds. First, students were randomly assigned to either experimental or placebo groups. The use of placebo rather than control groups provided for a true test of moral reasoning theory. That is, by using placebo groups the researcher was able to test the effect of the moral content of the treatment conditions over conditions containing no (or no explicit) moral content (Niles, 1986). The placebo conditions mirrored the experimental conditions in every aspect except the inclusion of moral content. The students in the placebo conditions participated in activities that were designed to be exactly like activities in their corresponding experimental conditions, all the while excluding any overt moral content.

Second, in order to ensure that students participating in the discussion groups felt at ease sharing their opinions and views with one another, the students in the MDG and NMDG participated in community-building activities prior to the commencement of the intervention. The use of community building activities that promoted sharing, cooperating, and perspective-taking among students may be indirectly seen as contributing to the promotion of socially responsible behavior, a necessary prerequisite for participation in group discussions. As Wentzel (1991a, 1991b, 1993) has noted, students characterized by socially responsible behavior contribute to creating safe, orderly school environments. These positive learning environments in turn facilitate learning and the development of interpersonal relationships among students. Wentzel further posits that these safe learning environments serve a motivational function by encouraging students
to become more engaged in learning activities. Thus, the practice of having students participate in community-building activities serves to ensure that students are in a positive and safe learning environment, and to motivate students to further participate in learning activities (i.e., moral dilemma discussions and nonmoral story discussions).

Third, given a goal of this study was to build upon previous research and not only replicate but extend previous research findings, it was important that the methodology employed addressed weaknesses in studies already conducted. A limitation of Arbuthnot and Gordon's (1986) study, for example, was that there was no control over the possible effects of group leadership. In the present investigation, group leaders or facilitators were rotated between treatment and placebo conditions in order to avoid any possible influences on student participation or motivation that might stem from having a particularly dynamic or engaging group leader.

Last, as a means of ensuring that students saw participating in the study as a regular part of their school experience, the weekly interventions took place at the same time each day, on the same day of the week, and in the same classroom. As such, the weekly treatment and placebo conditions were perceived as very much a part of students' regular school experience. Thus, students' participation in discussion or reflection conditions was likely to reflect their overall engagement in school-based activities. This factor, in conjunction with the high participation rate among sixth and seventh grade students in the school (i.e., 98%), help strengthen the claim that the findings of this study are highly generalizable.

As with all empirical investigations, there were several limitations to this study. The design of this study should have included a session with the participants in which they could provide feedback as to how they liked participating in the discussion or reflection sessions. That is, it would be interesting to note if students enjoyed reflecting on moral issues or whether they felt the urge to speak out and voice their views about the issues contained in the dilemmas they
read. Recall that this study took place over several weeks and that the students in the MRG and the NMRG were required to sit quietly and generate written responses to a series of probe questions. Students in these conditions were not allowed to interact with one another. It merits noting that while the MRG proved to be an effective means of facilitating moral reasoning, it was not altogether popular among students. The two research facilitators who supervised students in the two reflection conditions regularly remarked how much the students appeared to dislike sitting quietly for entire class periods (i.e., 40 minutes). Further, students in the reflection conditions repeatedly asked why they had to be quiet and why they could not do like their friends in the discussion groups. These insights, while entirely anecdotal in nature, suggest that while encouraging students to individually reflect on moral dilemmas may help facilitate their moral reasoning, it is not an entirely appealing approach to moral education from the student’s perspective. Certainly, an approach of this nature runs counter to current trends in pedagogy in which students participate in hands-on, cooperative group lessons in which they jointly construct their knowledge.

Certainly, it must be recognized that the reflection activities characterizing the MRG and the NMRG were not unpleasant for all students. That is, there were students who appeared to thoroughly enjoy participating in individual reflection. How does one know if a student will respond best to a reflection- or discussion-based approach? Could the study have assessed students’ learning style to determine if the success of the interventions varied as a function of individual learning style?

Several authors have described different learning styles or learning preferences (e.g., Dunn, 1987; Snider, 1990; Snow, Corno, & Jackson, 1996). Learning styles are generally considered as the individual’s preference for particular learning environments. For example, Torrance (1986) has described bright students as having a preference for less structured
instruction (i.e., quiet, and solitary learning environments). Thus, it is likely that the extent to which a student engages in, and profits from, a moral reflection or a moral discussion intervention is, in part, a function of his or her learning style.

A second limitation to the study was that there was no controlling for individual reflection in the moral discussion intervention. That is, while it could be assured that no discussion took place during the weekly individual reflection intervention, it is likely that students in the moral discussion intervention participated in individual reflective abstraction in addition to socially interacting with their peers. The extent to which students participated in individual reflection in addition to social discussion remains unclear. As such, while it appears easy to dichotomize the two treatment conditions as either reflection or discussion, the claim can only be made that the reflection condition contained no peer discussion but not that the discussion condition did not contain any reflection.

While no research has been conducted that has examined the processes underlying how participants individually reflect on moral dilemmas, research has been conducted that has examined the nature of the transactions that take place during moral dilemma discussions. Kruger (1992), for example, in her analysis of transactional dialogue between child-child and child-adult dilemma discussions, has found that transactive dialogue (dialogue that encourages perspective-taking and the clarification of one's views) best fosters moral development. While the nature of moral dilemma discussions may vary as a function of the dialogue found within group discussions, it remains to be seen whether there exist differences in the ways in which participants engage in individual reflection. Further research examining this aspect of reflective abstraction within the context of moral development is warranted.

A third limitation of the study involved the restricted range of moral reasoning scores as provided by Gibbs' Social Moral Reflection Measure (Gibbs et al., 1992). The author
acknowledges that the restricted range (e.g., 2.51 to 2.71) is partly to blame for the lack of behavioral changes found across self, peer, and teacher ratings. That is, perhaps more salient behavioral findings would have emerged had participants varied more greatly in their moral reasoning scores.

A last consideration was that no follow-up data were collected to determine if the interventions had long lasting effects on the moral reasoning and behavior of students. While collecting follow-up data would have been desirable, it would have proven particularly difficult given the data was collected in the Spring and the following Fall term saw many of the participants transitioning to a number of local high schools. Collecting follow-up data would lend further support to the empirical findings that arose from this study. Notably, over time, would students who individually reflected on moral dilemmas maintain their gains in moral reasoning to the same extent as students who discussed dilemmas with their peers? Additionally, the collection of follow-up data would provide valuable information to researchers interested in examining the durability of behavioral changes that stem from moral reasoning interventions.

Practical Implications and Future Directions

Certainly, there appears to be a growing need on the part of both parents and educators to assist young people in their quest to make wise moral decisions. Authors such as Bear, Richards, and Gibbs (1997), Battistich, Solomon, Watson, Solomon, and Schaps (1989), Lapsley (1996), and Lickona (1991) have highlighted the need for sociomoral education in schools and have outlined plans to assist teachers whose goal is to foster moral development within the school setting. The present study contributes to the endeavor of promoting sociomoral reflection and practice within the elementary school system by not only clarifying the role that interindividual and intraindividual cognitive conflict play in promoting moral development but also by further
The findings stemming from this investigation offer insights and strategies to educators who are interested in varying the format of the moral interventions they use with their preadolescent students. By incorporating activities that promote individual reflection, educators can compliment the traditional discussion-based format typically found in classroom settings. Frequently, teachers struggle with how best to include all students in class discussions. There often is an assumption on the part of teachers that all students should engage in discussions and actively voice their views and opinions. Given what is known about individual differences and the different learning styles characterizing students, the discussion format typically used in classrooms might not meet the needs of all students. Certainly, the methodology employed in this study may assist teachers in encouraging students who do not readily participate in class discussions to reflect upon controversial moral issues that would otherwise be addressed within a class-discussion format.

The findings of this study may also contribute to better understanding the relation between the format of moral reasoning interventions and their impact on student behavior. It is important for educators to consider the role that having students individually reflect on moral issues (without an avenue for discussion) may play in contributing to teacher perceptions of student hyperactivity. The implications of student hyperactivity are far reaching and impact not only student learning but academic achievement, student-teacher relationships, and classroom climate.

In addition to the practical implications stated above, the findings of this study provide the basis from which further research using reflective abstraction may be conducted. Certainly, a next logical step would be to examine a blended approach to fostering moral reasoning. That is, how would a moral reasoning intervention that incorporated both discussion and reflection of moral
dilemmas influence the moral development of students? In addition to testing a blended reflection/discussion model, it would be interesting to examine student reactions to each of these interventions. That is, do students enjoy reflecting upon or discussing moral dilemmas? Delving further into the preferences of students, it would be interesting to examine how student preference for the reflection or discussion format varies as a function of individual learning styles. Future research directions may also examine how moral reasoning varies as a function of sociometric status. Of particular interest is whether students experiencing social isolation at school (e.g., “rejected” or “neglected” students, as identified in the work of Wentzel (1993) and others) would profit from a reflection-based moral intervention rather than a socially-based intervention.
References


Appendix A

Parent Information Letter and Consent Form
PARENT CONSENT FORM

Study Title:  Promoting Social Reasoning and Prosocial Behaviours in Early Adolescence

Researchers:  Ty Binnet, B.A., B.Ed., M.A.
Doctoral Candidate
University of British Columbia
Classroom Teacher
James Gilmore Elementary

Kimberly Schonert-Reichl, Ph.D.
Associate Professor
Department of Educational Psychology and Special Education
University of British Columbia
2125 Main Mall
Vancouver, B.C. V6T 1Z4

I have read and understand the attached letter regarding the study entitled "Promoting Social Reasoning and Prosocial Behaviours in Early Adolescence". I have also kept copies of both the letter describing the study and this permission slip.

_____ Yes, my son/daughter has permission to participate.

_____ No, my son/daughter does not have permission to participate.

Parent's Signature_____________________________________________________
Son or Daughter's Name_________________________________________________
Date______________________________________________________________
Appendix B

Student Information Letter and Consent Form
Dear Teacher:

You and your students have been selected to be participants in a research project that we are conducting at Gilmore Elementary School entitled "Promoting Social Reasoning and Prosocial Behaviours in Early Adolescence." The purpose of this study is to investigate how pre-adolescents think and feel about various social issues in two distinct settings: individually or in a group discussion format. The information collected will be utilized in the completion of my dissertation thesis. There is very little research about Canadian students. More research is needed and you can help us understand students better by being a participant in this research study. It is hoped that the results of this study will help educators better understand pre-adolescence and be better equipped to promote positive adolescent development and improve education for all. Teachers who participate will receive a copy of the results of the study along with some suggestions and guidelines for facilitating social reasoning among intermediate grade students. Students who return their permission slips (with affirmative or negative responses) will have the opportunity of winning a $20 Gift certificate to a local movie theatre. One students' name will be randomly drawn from each class.

The purpose of this form is to give you the information you need in order to decide whether or not you want to participate in this study. You may choose not to participate in this study now or at any point during the study and there will be absolutely no penalty for withdrawing. If you choose not to participate, that choice will not in any way jeopardize your job. If you decide to participate, you will be asked to fill out a social skills rating form for each of your students that participate in the project. All of your answers will be kept completely confidential.

This study will take a total of 9 weeks and your students will be asked to participate for one period per week over the course of the 9 weeks (Each Tuesday from 12:35 to 1:15 starting February 23\textsuperscript{rd} and ending April 27\textsuperscript{th}). As part of the study, students will complete several questionnaires. The first questionnaire will ask students about their background (e.g., age, gender). Another questionnaire contains several stories dealing with important social issues. The third questionnaire, a sociometric rating scale, asks students a variety of questions about their friendships. Finally, the fourth questionnaire asks students to rate their own behaviour. The first set of questionnaires will be given on Monday, February 15\textsuperscript{th} and the second set will be administered on
TEACHER CONSENT FORM

Study Title: “Promoting Social Reasoning and Prosocial Behaviours in Early Adolescence.”

Researcher: John Tyler Binfet

Faculty Advisor: Dr. Kimberly A. Schonert-Reichl
Associate Professor
Department of Educational Psychology and Special Education
Faculty of Education
University of British Columbia
2125 Main Mall
Vancouver, B.C. V6T 1Z4

I have read and understood the attached letter regarding the study “Promoting Social Reasoning and Prosocial Behaviours in Early Adolescence.”

____ Yes, I agree to participate

____ No, I do not agree to participate

Name (please print) ______________________________
Signature ______________________________
Date: ______________________________
Appendix D

Demographic Questionnaire
We are interested in obtaining some information about your background. Please follow the directions carefully and answer all of the questions. **REMEMBER, YOUR ANSWERS WILL REMAIN PRIVATE AND WILL ONLY BE SEEN BY THE RESEARCHERS.**

1. How do you describe yourself? (CIRCLE ONE)
   a) White (Anglo, Caucasian, European descent, etc.) .............. 1
   b) Latin (Spanish, Mexican, South American, etc.) .............. 2
   c) Black (African, Haitian, Jamaican, etc.) ...................... 3
   d) First Nation (Aboriginal, Native Indian, etc.) .............. 4
   e) Asian (Oriental, Chinese, Japanese, Korean, etc.) .............. 5
   f) East Indian ............................................................. 6
   g) Philipino ................................................................. 7
   If your race or cultural heritage is not listed above, please describe your heritage here ____________

2. Are you male or female? (CIRCLE ONE)
   a. Male .............. 1
   b. Female .............. 2

3. How old were you on your last birthday? ________________ (years)

4. When is your birthday? (MONTH) (DAY) (YEAR YOU WERE BORN)

5. What grade are you in this year? (CIRCLE ONE) 6 7

6. Which of these adults do you live with MOST OF THE TIME? (CIRCLE ALL THE PEOPLE THAT YOU LIVE WITH)
   a. Both my parents ...................... 1
   b. My mother only ...................... 2
   c. My father only ...................... 3
   d. My mother and my stepfather .... 4
   e. My father and my stepmother ....... 5
   f. Grandparent(s) ...................... 6
   g. Other persons ...................... 7
   (Please indicate who this **Other Person** is. For example, if you live with your Uncle, please write “Uncle” in the blank).

7. Please describe the job held by your **FATHER** (stepfather or male guardian). **DESCRIBE WHAT THEY DO AT WORK:** for example, office clerk, salesperson, auto mechanic, nurse, electronics technician, lawyer, etc.)

8. Please describe the job held by your **MOTHER** (stepmother or female guardian). **DESCRIBE WHAT THEY DO AT WORK:** for example, office clerk, salesperson, auto mechanic, nurse, electronics technician, lawyer, etc.)
Appendix E

Sociomoral Reflection Measure - Short Form
Social Reflection Questionnaire

Name: __________________________  Date: __________________________

Birthdate: ________________  Sex (circle one): male female

Instructions

In this questionnaire, we want to find out about the things you think are important for people to do, and especially why you think these things (like keeping a promise) are important. Please try to help us understand your thinking by WRITING AS MUCH AS YOU CAN TO EXPLAIN—EVEN IF YOU HAVE TO WRITE OUT YOUR EXPLANATIONS MORE THAN ONCE. Don’t just write "same as before." If you can explain better or use different words to show what you mean; that helps us even more. Please answer all the questions, especially the "why" questions. If you need to, feel free to use the space in the margins to finish writing your answers.
1. Think about when you've made a promise to a friend of yours. How important is it for people to keep promises, if they can, to friends?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

2. What about keeping a promise to anyone? How important is it for people to keep promises, if they can, even to someone they hardly know?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

3. How about keeping a promise to a child? How important is it for parents to keep promises, if they can, to their children?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
4. In general, how important is it for people to tell the truth?  
Circle one: very important important not important  
WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

5. Think about when you’ve helped your mother or father. How important is it for children to help their parents?  
Circle one: very important important not important  
WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

6. Let’s say a friend of yours needs help and may even die, and you’re the only person who can save him or her. How important is it for a person (without losing his or her own life) to save the life of a friend?  
Circle one: very important important not important  
WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?
7. What about saving the life of anyone? How important is it for a person (without losing his or her own life) to save the life of a stranger?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

8. How important is it for a person to live even if that person doesn’t want to?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?

9. How important is it for people not to take things that belong to other people?

Circle one: very important important not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?
10. How important is it for people to obey the law?
Circle one: very important   important   not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?


11. How important is it for judges to send people who break the law to jail?
Circle one: very important   important   not important

WHY IS THAT VERY IMPORTANT/IMPORTANT/NOT IMPORTANT (WHICHEVER ONE YOU CIRCLED)?


Appendix F

Self-Ratings of Behavior Questionnaire
# The Student Behaviour Scale

**PART ONE**

For each of the statements below, circle the word that best describes you. Only circle one word for each statement.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Often</th>
<th>Sometimes</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I am impatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I make trouble for others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. I get along well with others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I shout</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I interrupt others while they are talking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. I play loud games</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. I play with matches or fire</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. I am funny</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I bother others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. I have bad moods</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I am impolite</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. I feel happy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. I don’t respect others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. I cry</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. I make new friends easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. It’s hard for me to stay still</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. At school I talk when I shouldn’t</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. I do well in school</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. I get mad</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. I play dangerous games</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The Student Behaviour Scale

PART TWO

For each of the statements below, circle the word that best describes you. Only circle one word for each statement.

1. I try to make sad people happier
   - Often
   - Sometimes
   - Never

2. I spend time with my friends
   - Often
   - Sometimes
   - Never

3. When I have to do things that I don’t like I get mad
   - Often
   - Sometimes
   - Never

4. I try to help others
   - Often
   - Sometimes
   - Never

5. I am gentle
   - Often
   - Sometimes
   - Never

6. I cry about things that don’t matter
   - Often
   - Sometimes
   - Never

7. I share things I like with my friends
   - Often
   - Sometimes
   - Never

8. I feel annoyed
   - Often
   - Sometimes
   - Never

9. I help others with their homework
   - Often
   - Sometimes
   - Never

10. I let others use my toys/games
    - Often
    - Sometimes
    - Never

11. I have bad dreams
    - Often
    - Sometimes
    - Never

12. I like to play with others
    - Often
    - Sometimes
    - Never

13. I trust others
    - Often
    - Sometimes
    - Never

14. I bite my fingernails
    - Often
    - Sometimes
    - Never

15. I hug my friends
    - Often
    - Sometimes
    - Never
The Student Behaviour Scale

PART THREE

For each of the statements below, circle the word that best describes you. Only circle one word for each statement.

1. I get into fights
   - Often
   - Sometimes
   - Never

2. I watch a lot of television
   - Often
   - Sometimes
   - Never

3. I kick and hit or punch
   - Often
   - Sometimes
   - Never

4. I get even when I'm mad
   - Often
   - Sometimes
   - Never

5. I hurt others
   - Often
   - Sometimes
   - Never

6. I like to be with others
   - Often
   - Sometimes
   - Never

7. I threaten others
   - Often
   - Sometimes
   - Never

8. I bite others to harm them
   - Often
   - Sometimes
   - Never

9. I am afraid of the dark
   - Often
   - Sometimes
   - Never

10. I argue with older children
    - Often
    - Sometimes
    - Never

11. I am envious
    - Often
    - Sometimes
    - Never

12. I tell lies
    - Often
    - Sometimes
    - Never

13. I say bad things about other kids
    - Often
    - Sometimes
    - Never

14. I feel sure of myself
    - Often
    - Sometimes
    - Never

15. I insult other kids or call them names
    - Often
    - Sometimes
    - Never

16. I push and trip others
    - Often
    - Sometimes
    - Never

17. I tell jokes
    - Often
    - Sometimes
    - Never

18. I tease other kids
    - Often
    - Sometimes
    - Never

19. I use bad words or swear
    - Often
    - Sometimes
    - Never

20. I like to fist-fight
    - Often
    - Sometimes
    - Never

Appendix G

Self-Ratings of Academic Competence
Self-Description Questionnaire

Circle the answer that best describes you. If you decide to change your answer, you should put an X through your old answer and circle your new answer. Use the following scale to help you answer:

<table>
<thead>
<tr>
<th>YES</th>
<th>always true for you</th>
</tr>
</thead>
<tbody>
<tr>
<td>yes</td>
<td>true most of the time for you</td>
</tr>
<tr>
<td>sometimes</td>
<td>sometimes true for you</td>
</tr>
<tr>
<td>no</td>
<td>hardly ever true for you</td>
</tr>
<tr>
<td>NO</td>
<td>not at all true for you</td>
</tr>
</tbody>
</table>

Example:

I like to read comic books ......................... YES yes sometimes no NO

1. I get good marks in READING ..................... YES yes sometimes no NO
2. Work in MATH is easy for me ..................... YES yes sometimes no NO
3. I'm good in all SCHOOL SUBJECTS ............ YES yes sometimes no NO
4. I like READING ..................................... YES yes sometimes no NO
5. I look forward to MATH ............................. YES yes sometimes no NO
6. I enjoy doing work in all SCHOOL SUBJECTS ....... YES yes sometimes no NO
7. I'm good at READING ............................... YES yes sometimes no NO
8. I get good marks in MATH .......................... YES yes sometimes no NO
9. I get good marks in all SCHOOL SUBJECTS ....... YES yes sometimes no NO
10. I am interested in READING ...................... YES yes sometimes no NO
11. I am interested in MATH ............................ YES yes sometimes no NO
12. I learn things quickly in all SCHOOL SUBJECTS .... YES yes sometimes no NO
Self Description Questionnaire

<table>
<thead>
<tr>
<th></th>
<th>always true for you</th>
<th>true most of the time for you</th>
<th>sometimes true for you</th>
<th>hardly ever true for you</th>
<th>not at all true for you</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>yes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sometimes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>no</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

13. I enjoy doing work in **READING** ..............  
14. I learn things quickly in **MATH** .............  
15. I am interested in all **SCHOOL SUBJECTS** ............  
16. Work in **READING** is easy for me ............  
17. I like **MATH** ...................................  
18. I look forward to all **SCHOOL SUBJECTS** ............  
19. I look forward to **READING** .................  
20. I'm good at **MATH** ...............................  
21. Work in all **SCHOOL SUBJECTS** is easy for me ...............................  
22. I learn things quickly in **READING** .........  
23. I enjoy doing work in **MATH** .................  
24. I like all **SCHOOL SUBJECTS** .............................  

Appendix H

Peer-Nominations of Behavior
Peer Rating of Behavior

1. Circle the names of students who share and cooperate.

2. Circle the names of students who help other kids when they have problems.

3. Circle the names of students who start fights and break the rules.

4. Circle the names of students who do things they are not supposed to do.
Appendix I

Teacher-Ratings of Behavior
Rating System

Social Skills Questionnaire

Frank M. Gresham and Stephen N. Elliott

Directions

This questionnaire is designed to measure how often a student exhibits certain social skills and how important those skills are for success in your classroom. Ratings of problem behaviors and academic competence are also requested. First, complete the information about the student and yourself.

Student Information

<table>
<thead>
<tr>
<th>Student's name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Middle</td>
</tr>
<tr>
<td>School</td>
<td>City</td>
</tr>
<tr>
<td>Grade</td>
<td>Birth date</td>
</tr>
<tr>
<td>Ethnic group (optional)</td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>Indian (Native American)</td>
</tr>
<tr>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td>Hispanic</td>
<td>Other</td>
</tr>
<tr>
<td>Is this student handicapped?</td>
<td>Yes</td>
</tr>
<tr>
<td>If handicapped, this student is classified as:</td>
<td></td>
</tr>
<tr>
<td>Learning-disabled</td>
<td>Mentally handicapped</td>
</tr>
<tr>
<td>Behavior-disordered</td>
<td>Other handicap (specify)</td>
</tr>
</tbody>
</table>

Teacher Information

<table>
<thead>
<tr>
<th>Teacher's name</th>
<th>Sex:</th>
<th>Female</th>
<th>Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>Middle</td>
<td>Last</td>
<td></td>
</tr>
<tr>
<td>What is your assignment?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular</td>
<td>Resource</td>
<td>Self-contained</td>
<td>Other (specify)</td>
</tr>
</tbody>
</table>
Next, read each item on pages 2 and 3 (items 1 - 48) and think about this student's behavior during the past month or two. Decide how often the student does the behavior described.

If the student never does this behavior, circle the 0.
If the student sometimes does this behavior, circle the 1.
If the student very often does this behavior, circle the 2.

For items 1 - 30, you should also rate how important each of these behaviors is for success in your classroom.

If the behavior is not important for success in your classroom, circle the 0.
If the behavior is important for success in your classroom, circle the 1.
If the behavior is critical for success in your classroom, circle the 2.

Here are two examples:

<table>
<thead>
<tr>
<th>How Often?</th>
<th>How Important?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>Sometimes</td>
</tr>
<tr>
<td>Shows empathy for peers.</td>
<td>0</td>
</tr>
<tr>
<td>Asks questions of you when unsure of what to do in schoolwork.</td>
<td>0</td>
</tr>
</tbody>
</table>

This student very often shows empathy for classmates. Also, this student sometimes asks questions when unsure of schoolwork. This teacher thinks that showing empathy is important for success in his or her classroom and that asking questions is critical for success.

Please do not skip any items. In some cases you may not have observed the student perform a particular behavior. Make an estimate of the degree to which you think the student would probably perform that behavior.

<table>
<thead>
<tr>
<th>Social Skills</th>
<th>How Often?</th>
<th>How Important?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Never</td>
<td>Sometimes</td>
</tr>
<tr>
<td>1. Controls temper in conflict situations with peers.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2. Introduces herself or himself to new people without being told.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>3. Appropriately questions rules that may be unfair.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>4. Compromises in conflict situations by changing own ideas to reach agreement.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5. Responds appropriately to peer pressure.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>6. Says nice things about himself or herself when appropriate.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>7. Invites others to join in activities.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8. Uses free time in an acceptable way.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>9. Finishes class assignments within time limits.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>10. Makes friends easily.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>11. Responds appropriately to teasing by peers.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>12. Controls temper in conflict situations with adults.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>13. Receives criticism well.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>14. Initiates conversations with peers.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>15. Uses time appropriately while waiting for help.</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>16. Produces correct schoolwork.</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

2
### Social Skills (cont.)

<table>
<thead>
<tr>
<th>Item</th>
<th>How Often?</th>
<th>Not Important</th>
<th>Important</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>17. Appropriately tells you when he or she thinks you have treated him or her unfairly.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. Accepts peers' ideas for group activities.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. Gives compliments to peers.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. Follows your directions.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. Puts work materials or school property away.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>22. Cooperates with peers without prompting.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. Volunteers to help peers with classroom tasks.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24. Joins ongoing activity or group without being told to do so.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25. Responds appropriately when pushed or hit by other children.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>26. Ignores peer distractions when doing class work.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27. Keeps desk clean and neat without being reminded.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>28. Attends to your instructions.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Easily makes transition from one classroom activity to another.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30. Gets along with people who are different.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Problem Behaviors

<table>
<thead>
<tr>
<th>Item</th>
<th>How Often?</th>
<th>Not Important</th>
<th>Important</th>
<th>Critical</th>
</tr>
</thead>
<tbody>
<tr>
<td>31. Fights with others.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>32. Has low self-esteem.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>33. Threatens or bullies others.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>34. Appears lonely.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35. Is easily distracted.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>36. Interrupts conversations of others.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37. Disturbs ongoing activities.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>38. Shows anxiety about being with a group of children.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>39. Is easily embarrassed.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40. Doesn't listen to what others say.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>41. Argues with others.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>42. Talks back to adults when corrected.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>43. Gets angry easily.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>44. Has temper tantrums.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45. Likes to be alone.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>46. Acts sad or depressed.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>47. Acts impulsively.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>48. Fidgets or moves excessively.</td>
<td>0 1 2</td>
<td>0 1 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Academic Competence

The next nine items require your judgments of this student's academic or learning behaviors as observed in your classroom. Compare the student with other children who are in the same classroom.

Rate all items using a scale of 1 to 5. Circle the number that best represents your judgment. The number 1 indicates the lowest or least favorable performance, placing the student in the lowest 10% of the class. Number 5 indicates the highest or most favorable performance, placing the student in the highest 10% compared with other students in the classroom.

<table>
<thead>
<tr>
<th>FOR OFFICE USE ONLY</th>
<th>Lowest 10%</th>
<th>Next Lowest 20%</th>
<th>Middle 40%</th>
<th>Next Highest 20%</th>
<th>Highest 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>49. Compared with other children in my classroom, the overall academic performance of this child is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>50. In reading, how does this child compare with other students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>51. In mathematics, how does this child compare with other students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>52. In terms of grade-level expectations, this child's skills in reading are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>53. In terms of grade-level expectations, this child's skills in mathematics are:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>54. This child's overall motivation to succeed academically is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>55. This child's parental encouragement to succeed academically is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>56. Compared with other children in my classroom this child's intellectual functioning is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>57. Compared with other children in my classroom this child's overall classroom behavior is:</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Stop. Please check to be sure all items have been marked.

FOR OFFICE USE ONLY

<table>
<thead>
<tr>
<th>SOCIAL SKILLS</th>
<th>PROBLEM BEHAVIORS</th>
<th>ACADEMIC COMPETENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HOW OFTEN? TOTAL (sums from page 3)</td>
<td>HOW OFTEN? TOTAL (sums from page 3)</td>
<td>HOW OFTEN? TOTAL (sums from page 4)</td>
</tr>
<tr>
<td>C + -</td>
<td>E</td>
<td>Total AC</td>
</tr>
<tr>
<td>A + -</td>
<td>I</td>
<td>(see Appendix B)</td>
</tr>
<tr>
<td>S + -</td>
<td>H</td>
<td>(see Appendix B)</td>
</tr>
<tr>
<td>Total (C + A + S)</td>
<td>Total (E + I + H)</td>
<td>Total AC</td>
</tr>
</tbody>
</table>

Standard Score | Percentile Rank | Standard Score | Percentile Rank | Standard Score | Percentile Rank |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>(see Appendix B)</td>
<td>(see Appendix B)</td>
<td>(see Appendix B)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SEM +</td>
<td>Confidence Level</td>
<td>SEM +</td>
<td>Confidence Level</td>
<td>SEM +</td>
<td>Confidence Level</td>
</tr>
<tr>
<td>68%</td>
<td>95%</td>
<td>68%</td>
<td>95%</td>
<td>68%</td>
<td>95%</td>
</tr>
</tbody>
</table>

Confidence Band (standard scores) | Confidence Band (standard scores) | Confidence Band (standard scores) |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>to</td>
<td>to</td>
<td>to</td>
</tr>
</tbody>
</table>

Norms used: □ Handicapped □ Nonhandicapped

Note: To obtain a detailed analysis of this student's Social Skills strengths and weaknesses, complete the Assessment-Intervention Record.
Appendix J

Directions for Administering Pre- and Posttest Measures
INSTRUCTIONS FOR ADMINISTRATION OF QUESTIONNAIRES
FOR "UNDERSTANDING PREADOLESCENTS' STUDY"
(Ty Binfet's Dissertation – Pretest Data Collection)

James Gilmore Elementary School
Thursday, February 18, 1999

Data Collection: Kim & Louise
Measures: Behavioral Nominations, Ratings of Own Behaviors, Feelings about School

Classrooms:

<table>
<thead>
<tr>
<th>Time</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:25-10:05</td>
<td>Mr. Tolman (Jamie)</td>
</tr>
<tr>
<td>10:20-11:00</td>
<td>Ms. Tolley (Anna)</td>
</tr>
<tr>
<td>12:35-1:15</td>
<td>Ms. Ong (Elaine)</td>
</tr>
<tr>
<td>1:15-1:55</td>
<td>Mr. Self (Paul)</td>
</tr>
</tbody>
</table>

Sequence of Events:

Introduce yourself to teacher
Ask if there are any students absent and note these on a sheet of paper. Also, ask the teacher if you someone can contact him later this week to see about administering measures to absentees.
Ask if there are any students who may need special help
Also, ask what students should do if they finish early (find some assigned work to do)
Have the students move their desks apart if they are too close. Also, ask the teachers if there are any students who should sit far apart from one another.

Introduction to Students: Setting a tone for administration

Hello. My name is _______ and this is _______.

We came back here today to continue to do our research project about preteens in Canada. In today's questionnaires, we will be asking about feelings about yourself, your friends, and your schoolwork.

We need to begin by having you clear off your desks and getting out a pen or a pencil (if you have not done so already, this is a good time to make sure that students are sitting apart from one another).

Before you start to fill out the questionnaires, there are a few things you need to know. Remember, as Mr. Binfet told you, we are doing a research project. In our research project we are trying to learn more about students your age, and the best way for us to learn about you is by asking you to tell us about yourselves – what you think about things.
There are THREE important things you need to know.

NOT A TEST
1. This is not a test -- there are no right or wrong answers and you won't get marked. We are only interested in your opinions -- so please answer how you really think and feel. It's just your opinion -- but that's important and that is what we are trying to get information about -- how students your age think and feel about school, themselves, and their friends. Even though this is not a test, however, it is very serious. We need to make sure we get accurate results in our study and to do this we need for you to take it seriously and to answer all of the questions honestly.

CONFIDENTIALITY/ETHICAL (RESEARCH PARTICIPATION) ISSUES
2. Also, we want to remind you that all of your answers will be completely confidential (private) -- no one, not your parents, your teachers, or your friends will be able to see your answers. But to really make your answers confidential, we need to make a deal or an agreement together. I agree to keep your answers private, and you agree to keep your answers are private.

NO TALKING
3. That gets to my third point -- keeping your answers private means that you should not talk to your classmates at all while we are filling out these questionnaires. Participating in a research study is very serious and I want to know your opinions, how you feel, so there should not be any talking about the answers you put down. Everybody has different opinions, people don't think and feel the same way about things. That's okay. Don't worry what other people have put down. Just mark how you feel. Okay? Everybody got the idea? Does everyone agree?

STEP ONE: HAND OUT QUESTIONNAIRES.
Please open your envelopes and take out the questionnaires. Because we want to keep your answers private, instead of putting your name on the questionnaires, you will just put a number. So, you need to take out the colored sheet with names and find your name and the number beside it. Now write your number on your envelope (students may write their name anywhere on the envelope.

STEP TWO: ADMINISTRATION
Okay, we are ready to begin. We will begin with the first questionnaire in the packet. Because we want to make sure you know how to fill out these questionnaires, we will begin by reading through the questions for you. There are three questionnaires.

Remember, we want you to answer honestly. Read the questions carefully and raise your hand if you have a question. You might find some of the questions strange. Do not worry about this. If you are not sure how to answer, raise your hand and Louise or I will come over and try and help you. Also, please do not skip any questions. Remember, you can only circle one answer. We will begin now.
Please remember that if you have ANY questions while we are doing these questionnaires, you can raise your hand and one of us will try to help you, okay?

Behavioral Nominations

For this first questionnaire we are interested in getting your opinions about your classmates' behaviors. You need to begin by first crossing out your own name. Then (read directions). Please answer honestly. Remember, no talking – you have to keep your answers private.

Behavioral Ratings of Own Behaviors

For this next questionnaire, we are interested in getting your feelings about yourself. Please circle only one answer for each statement. Answer honestly and raise your hand if you have any questions.

OFTEN means most of the time
SOMETIMES means only some of the time.
NEVER means not at all all.
Feelings About School Questionnaire

This is the last questionnaire. Please listen carefully to the instructions so that you know how to respond correctly. In these questions, we ask you to think about how you feel about school in general.

I am going to read each of the statements and ask you to circle the answer which tells how true each of the statements is for you (reminder about response scale on board). Remember you can only circle one answer. I am going to read each of the statements out loud. For some of the questions we will be asking for you to tell us how true it is for you. For each sentence, you are going to circle one answer which says how true the statement is about you using the following format:

Circle **YES** if the sentence is always true for you.
Circle **yes** if the sentence is true for you most of the time.
Circle **sometimes** if the sentence is sometimes true for you.
Circle **no** if the sentence is hardly ever true for you.
Circle **NO** if the sentence is not at all true for you.

So, for example, let's say the statement said "I like roller blading".

If this is always true for you what would you circle? (YES).
If this was sort of true for you what would you circle? (yes)
If this statement was true for you only some of the time what would you circle? (sometimes).
If this statement was sort of not true for you what would you circle? (no)
and if this was not at all true for you what would you circle? (NO).

How about the sentence "I like pizza" "I like pizza with black olives, "

**Remember, you can only circle one answer. I will begin now.** (Go through directions.)

ANSWERING QUESTIONS

When a student asks a question about any particular item that is confusing to them -- you should avoid providing your own interpretation to them. Instead, you should attempt to simply reread the question for them directing it to the individual student (e.g., what would you say to me if I said --READ QUESTION). You should encourage students to interpret questions for themselves, however, if there is a particular word that is troubling them -- help them out with a definition or ask the other facilitator. Please note any issues that arise on a piece of paper for me.
OTHER ISSUES

Circulate around room and see if students are having any problems.

- As students finish up, collect their questionnaires (put everything back in their envelope) and glance through the questionnaire to make sure they did not mistakenly skip a question or have circled two responses.
- Also, make sure they have some work to do and that they don't disrupt others.

END OF CLASS

- Collect all surveys.
- Thank students.
- Remind them that we will be back next week.
Appendix K

Community Building Activities

(Gilmore Elementary School, 1997)
Objectives

1. To build inclusion and sense of community
2. Practice active listening

Grades: K-adult
Time: Depending on group size
Grouping: full community
Materials: ball of colored yarn

Instructions

1. Ask participants to sit in one large circle.
2. Explain that during this activity each person will have an opportunity to share his name and something special about himself. Give people a minute to think of something special.
3. Begin the activity by stating your name and something about yourself: “My name is Sue, and I am wonderful at organizing things.” Then, while holding onto the end of the yarn roll, the yarn ball to someone across from you in the circle. This process continues until all have either shared or passed, and a “spider web” pattern has been created.

Discussion

Ask questions such as:

- How might we symbolically interpret this “spider web”? Note symbolism, design, community involvement etc.
- What helps to build community when people get together?

After brief discussion, to unravel spider web, have last person toss ball to connecting person, and when doing so repeat that person’s name and perhaps special quality. Continue the process until spider web is unwound and ball back to you.

Reflection

Ask questions such as:

- Does anyone miss the spider web? How do you feel now?
- Do you feel different than when we started the activity?
- Was it difficult to remember names and personal data?
- Would anyone like to share an “I learned” statement?

Appreciation

Suggest people make statements of appreciation:

- “I liked it when you said . . . ”
- “I’m a lot like you when . . . ”
- “I admire you for . . . ”
Objectives
1. To build inclusion and influence
2. To enhance communication skills
3. To share personal beliefs, feelings and interests

Instructions
1. Ask all to sit or stand in large community circle.
2. Explain that we will interview a person who will sit in the center of the circle by asking him only three questions. The person will choose the questions from people who raise their hands. He has the right to "pass" on any questions that he chooses not to answer.
3. Model the activity first by being in the center and responding to three questions yourself.
4. Questions may be autobiographical or may relate to issues, curriculum, politics, hobbies, friendship, sports, etc.

Discussion
• Did this activity help you to know group members better?
• Can we generalize about the types of questions asked?

Reflection
• How did you feel being interviewed?
• Did the group listen? How did you know?

Appreciation
Invite statements of appreciation:
• "I liked it when . . . ."
• "I admired your honesty when . . . ."
PASS MATILDA TINKLEHORN

Number of People: Unlimited
Materials: None
Time: 5 minutes
Directions:

1. This is a variation of the old rumor game.

2. Use the following story about Matilda Tinkelhorn as a rumor to pass from person to person, whispering the short story so as other members don't hear. The last person is to tell what was heard. The group then discusses how accurately the rumor was passed.

MATILDA TINKLEHORN - Matilda Tinklehorn, who was 93 years old, lived in Tunesville, Tennessee with Tippy her turtle. She also lived with all of her chickens, elephants and koala bears. She enjoyed surfing, except her bathtub was too small and the water kept draining out.

3. A second round can be done with Purple Martians.

PURPLE MARTIANS - In the year 2042, the Purple Martians from Yukatana came to earth. They were very ugly and had purple faces, 9 arms, 3 heads, 6 ears, bananas for legs and raisins for toes. After landing in San Francisco on the freeway, there was an instant mass of crashes - twelve dozen autos and trucks collided into the green and black 12-pronged spaceship. The Purple Martians were called Polowanos and spoke like they were in echo chambers. Their first words were - “What's Up Doc?”
STRING BALLOONS

Number of People: Unlimited
Materials: String, 10 - 12" balloons, and a whistle
Time: 10 - 15 minutes
Directions:
1. The Participants should be given pieces of 12" string and a balloon to blow up.
2. The string should be tied to the balloon and the other end tied to the right or left ankle.
3. After everyone has completed tying their balloons, the participants should be instructed to stand in a circle with their hands behind their backs, standing on one foot. It can be either foot.
4. When the whistle blows, the group moves around each person, trying to pop someone else's balloon.
5. Once a balloon is popped, that person sits down.
6. The winner is the last person with the balloon still inflated and attached to the ankle.
WHO'S THE LEADER

Number of People: Unlimited
Materials: None
Time: 10 minutes
Directions:
1. Ask a volunteer to leave the room for the group to receive instructions.
2. The group is told that they are to select a leader who will initiate different sounds or movements while they are sitting or standing in a circle.
3. The group should attempt to pick up the movement without looking directly at the leader, so as to fool the volunteer whose objective it is to find the leader.
4. The individual returns to the circle and stands in the middle.
5. Everyone, except the person in the middle, knows who the leader is. The group should initiate the action, predetermined, as the volunteer enters the room. The leader must change movements at least every 30 seconds. A timer could be appointed if necessary.
6. The volunteer has a maximum time of one minute between guesses and a maximum of three guesses to find the leader.
7. If successful, then the leader changes places with the volunteer.
8. The volunteer at this point can turn around or again leave the room to designate who the next leader is.
9. This continues until five or six different leaders have successfully fooled the volunteer.
Number of People: Unlimited
Materials: "Friends" sheet
Time: 10 - 15 minutes
Directions:

1. Remind the group members, "We all need to have friends and to be a friend. Sometimes it is interesting to look at the people we call on to help us in different situations, and to look at the people who call upon us for help in different situations. How about you?"

2. Ask the participants to fill out the "Friends Sheet" individually, then place the participants in groups of 4 - 5 people and ask them to share information regarding:

   a. The number of different people on their sheets
   b. The number of people who are the same sex or different
   c. The number of people who are the same age, younger, or older
   d. The number of people who are relatives
   e. The number of times they included their parents on the list

3. Caution them not to reveal names if they prefer, so as not to embarrass anyone.

Friends

Who do you call on when:

1. You want to go to a movie?
2. You feel lonely and want company?
3. Your parents might be upset with you and you need someone with whom to talk?
4. You do something, and you want it to be seen or heard?
5. You need some special advice?
6. You want an honest opinion on your appearance?
7. You want to play tennis or swim or play ball?
8. You have gotten a new record and you want to listen to it?
9. You have a secret you want to share?

Who calls on you when:

1. He/She has a problem?
2. He/She needs special advice?

Who is the friend:

1. That will be a friend forever?
2. That needs you the most?
3. For whom you have a great deal of respect?
THE BACKSIDE SHUFFLE

Number of People:  Unlimited
Materials:  Balloon, string, and a whistle
Time:  5 - 10 minutes
Directions:

1. The participants should be given pieces of string long enough to wrap around each waist and attach to a balloon.
2. Each participant should blow up a balloon, tie it to the string and then tie the string around the waist with about 3 - 4" extra string length.
3. Divide the participants into groups of 6 to 8.
4. At the whistle, members of the group are to sit on their other member's balloon—not their own, just other team members.
5. The first group to pop all of their balloons is the winner.
6. No hands or feet can be used to pop the balloons.
Appendix L

Sample Brainteaser Activities

(DiSpezio, 1996)
How Many Triangles?

This tranquil scene contains many triangles. How many can you find?

Oddly Enough

All but one of these drawings have something in common. Which of them is the odd one out and why?
The Animals Went in Two by Threes

There was merry mayhem one day when 6 emus, 4 roos, a possum, 4 koalas, 3 wombats and 2 echidnas escaped from the Australian section at the zoo. But, on each of the two following days half of the escapees were recaptured.

How many were still free at the beginning of the third day?

How Many Squares?

How many squares can you find in this modern painting?
Trick Question

Does Gladys use the same pole or poles of different length when performing her two daring tricks?

Which Comes Next?

Here is a series of faces. Which of the faces in the row below should come next in the series?
Doodlegrams

Scenes from everyday life? Can you identify them?
Go Fly a Kite

These four enthusiasts have managed to get their kite strings tangled. Whose kite is whose?
Appendix M

Moral Dilemmas used in the Moral Discussion and Moral Reflection Interventions
Joe is a 14-year-old boy who wanted to go to camp very much. His father promised him he could go if he saved up the money for it himself. So Joe worked hard at his paper route and saved the $100 it cost to go to camp, and a little bit more besides. But just before camp was about to start, his father changed his mind. Some of his friends decided to go on a fishing trip and Joe's father was short of the money it would cost to go. Joe’s father told Joe to give him the money he had saved from his paper route. Joe didn't want to give up going to camp, so he thinks of refusing to give his father the money. Should Joe refuse to give his father the money? Why or why not?

Judy, a twelve-year-old girl, was promised by her mother that she could go to a special rock concert coming to their town if she saved up from baby-sitting and lunch money. Judy would have to save enough money to buy a ticket herself. Judy managed to save up the $45 plus another $15. But then her mother changed her mind and told Judy that she had to spend the money on new clothes for school. Judy was disappointed and decided to go to the concert anyway. She bought a ticket and told her mother that she had only been able to save $20. That Saturday she went to the concert and told her mother that she was spending the day with a friend. A week passed without her mother finding out. Judy then told her sister, Louise, that she had gone to the concert and had lied to her mother about it. Louise wonders whether to tell her mother what Judy did.

Sharon and her best friend Jill walked into a department store to shop around. As they browsed, Jill saw a sweater she really liked and told Sharon she wanted to try the sweater on. While Jill went to the dressing room, Sharon continued to shop.

Soon Jill came out of the dressing room wearing her coat. She caught Sharon’s attention with her eyes and glanced down at the sweater under her coat. Without a word, Jill turned and walked out of the store.
Moments later, the store security officer, sales clerk, and the store manager approached Sharon. "That's her, that's one of the girls. Check her bags." blurted the clerk. The security officer said he had the right to check bags and Sharon handed them over. "No sweater in here," he told the manager. "Then I know the other girl has it," the clerk said, "I saw them just as plain as anything. They were together on this." The security officer then asked the manager if he wanted to follow through on the case. "Absolutely," he insisted, "shoplifting is getting to be a major expense in running a store like this. I can't let shoplifters off the hook and expect to run a successful business."

The security officer turned to Sharon. "What's the name of the girl you were with?" he asked. Sharon looked up at him silently. "Come on now; come clean," said the security officer, "If you don't tell us, you can be charged with the crime or with aiding the person who committed the crime."

Rachel
(Colby & Kohlberg, 1987)

Rachel Brown is a 13-year-old girl who has a serious lung disease. The doctors have told Rachel's parents that she will probably die within a few months. Mr. Brown, Rachel's father hears about a possible cure discovered by some doctors in France; so he goes there to find out about it. The French doctors have cured many people with their new drug, but the drug is not yet legal in Canada and Rachel is too sick to travel to France. Mr. Brown is desperate and thinks of smuggling the drug back into Canada.

Don't be a Nerd
(Binfet, 2000)

Tory, Kris, and Sue, all seventh-graders, are friends. One night they're at Tory's house watching TV while her parents are out for the evening. After a few shows, they decide they're hungry. Opening the refrigerator, Tory sees some leftover pizza and a six-pack of beer. "Hey", she says, "let's have some pizza and beer!" Kris says, "Great!"

"Have you guys had beer before?" Sue asks.

Tory and Kris both say sure, they've had beer. Not to get drunk, just to have a little fun. That's news to Sue.

"I think I'll just have pizza," Sue says.

"Come on, don't be a nerd!" Tory says. "A little beer won't hurt you. Nobody will ever know! We'll never tell!"
Sue doesn’t want to look like a nerd, but she knows her parents don’t want her to drink and have trusted her to respect that. She wonders if it would be okay just this one time . . . but she feels a tightening in her stomach when she thinks of doing that.

Tory and Kris each open up a can of beer and take a swig. Tory opens a third can and holds it out to Sue: “Hey, what’s the big deal?” Try it - you’ll like it!”

One Wrong Turn
(Binfet, 2000)

Bill and Sam had been best friends since kindergarten. And even now, at the age of 13, they were in the same class at school, on the same soccer team, and lived in the same neighbourhood. One of the passions they both shared was their love of hiking. Both Bill and Sam were experienced hikers. They frequently went on day hikes together.

On one of their outings, Bill and Sam decided to try a new route, a route which took them to the top of a mountain pass they had never climbed. The boys were being very careful as they were climbing in unfamiliar terrain. Even their parents would have no idea where they were. The slope was steep and they joked that it was more like rock climbing than hiking.

It had begun to rain and the terrain was very slippery. Suddenly, Bill slipped and fell backwards into a crevasse (a deep and narrow opening between the rocks). By the time Sam reached him Bill had suffered serious injuries. He had broken both his ankle and his leg and had many cuts and bruises. Bill was also complaining that his ribs ached and he had trouble breathing. With great difficulty, Sam was able to help Bill into a small cave where Sam did his best to make his friend comfortable.

Night was quickly approaching and Sam knew he had to act quickly. Sam had taken first aid but knew that Bill’s injuries were more serious than anything Sam could handle on his own. Because Bill’s injuries were so serious, Sam was certain that Bill only had a few hours to live. Bill even told Sam that he was sure he was dying.

Bill needed help getting down the mountain but this was impossible because of his life-threatening injuries. If Sam left to get help, he was sure he could find his way back down the mountain but he would not be able to find the cave again until the morning when it was light. However, if Sam stayed with Bill, he would risk freezing to death. Already it was bitterly cold on the mountain. The boys had no equipment for an overnight hike and had only their jackets to keep them warm. Sam also knew that no rescue team would find them because of the new route they had taken.
Sam was confused. He wanted to comfort his best friend Bill in his dying hours but he also wanted to save his own life.

_The Empty Plate_
_(Binfet, 2000)_

Susan is a student in the seventh grade. Susan comes from a 'rough' family. Her parents are divorced and she hasn't seen her father in years. Lately her mom seems more interested in partying than parenting. Often, Susan is left to take care of her two brothers, Jack and Tom. Susan's mother gets social assistance checks each month. This assistance is the only help Susan's family gets and the money buys food and pays the rent.

Lately, Susan's mother has been spending the social assistance money on alcohol and has been staying out very late. Susan is embarrassed of her family's problems and does not want to talk to anyone about it. Susan doesn't have any relatives in town and is basically on her own to figure out life's problems.

Because Susan's mother is so irresponsible, Susan has been taking care of her brothers. She helps them get dressed and ready for school and she does her best to make sure they help keep the "family secret" when at school. None of the teachers or students know how difficult life is for Susan and her brothers. Susan doesn't want her mother to get into trouble so she does her best to cover up when her mother is away partying. Often, Susan feels more like a mother than a sister to her brothers. Because there has been so little money for food in the house, Susan has been stealing food from a local grocery store to feed herself and her brothers. The stealing had gone on for a while and Susan had become an expert shoplifter. She and her brothers didn't eat like kings but they had enough to get by. One day, Susan was caught by the store manager. The store manager has lost a lot of money to shoplifters and is treating Susan's crime very seriously. He thinks of pressing charges.

_The Future of Basketball at Bingham School_
_(Binfet, 2000)_

Greg, a student at Bingham Middle School, has always wanted to play basketball. Bingham Middle School hasn't had a basketball team for the past two years because the school hasn't felt the students are responsible enough to participate in extra-curricular activities. When the school did have a team, the
team was constantly suspended for bad behaviour. Bingham basketball players had a reputation for being rowdy and undisciplined.

This year, there is a new principal at Bingham Middle School and she has decided to possibly allow a boy's basketball team to hold practices and enter tournaments. If the tryouts run smoothly, then the team will be declared official and be allowed to compete in tournaments like all the other schools.

During the team tryouts, Greg walked into the boy's washroom and discovered three of his classmates vandalizing the washroom. They were stuffing oranges and apples down the toilet and causing the toilets to overflow and flood. The three boys weren't just any students, they were Bingham's most popular students. The three boys looked at Greg and threatened him. If Greg told on them, the boys promised to make his life miserable. Greg knew they'd do it too. Some students were bullied so badly, they didn't even want to come to school anymore.

Later that day at practice, Bingham's basketball coach announced that there had been an incident in the boy's washroom. The coach knew the flooding had been caused by students associated with the basketball tryouts as no other students were permitted in the gym area where the washrooms were located. If no one came forward with information about who caused the flooding, then Bingham would cancel all the basketball tryouts, the practices, and cancel the boy's basketball team entirely.

Greg thinks of coming forward to tell the coach about what and who he saw but he also thinks about what life would be like if the boys carried out their threats.
Appendix N

Sample Dilemma for Moral Discussion Group (MDG)
Sharon and her best friend Jill walked into a department store to shop around. As they browsed, Jill saw a sweater she really liked and told Sharon she wanted to try the sweater on. While Jill went to the dressing room, Sharon continued to shop.

Soon Jill came out of the dressing room wearing her coat. She caught Sharon's attention with her eyes and glanced down at the sweater under her coat. Without a word, Jill turned and walked out of the store.

Moments later, the store security officer, sales clerk, and the store manager approached Sharon. "That's her, that's one of the girls. Check her bags." blurted the clerk. The security officer said he had the right to check bags and Sharon handed them over. "No sweater in here," he told the manager. "Then I know the other girl has it," the clerk said, "I saw them just as plain as anything. They were together on this." The security officer then asked the manager if he wanted to follow through on the case. "Absolutely," he insisted, "shoplifting is getting to be a major expense in running a store like this. I can't let shoplifters off the hook and expect to run a successful business."

The security officer turned to Sharon. "What's the name of the girl you were with?" he asked. Sharon looked up at him silently. "Come on now; come clean," said the security officer, "If you don't tell us, you can be charged with the crime or with aiding the person who committed the crime."

**PART 1**

1. Should Sharon tell the security officer who the "other girl" is? Why or why not?

Our group thinks that Sharon

because


PART 2 Reasons Why Sharon Should Tell

Read each statement aloud to your group. Next, rate the statement in terms of being a good/strong reason or a weak reason. If the statement is something your group agrees with you might rate it highly (for example a 4 or a 5), if you think the statement is weak, then you might rate it a 1 or a 2. For each statement you must give a reason for your decision.

1. Sharon should tell the security officer who Jill is because if Jill finds or starts to see that she can get away with stealing, she might try to shoplift again.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

2. Sharon should tell the security officer who Jill is because a good citizen does not lie to the police (or to security officers) or do other bad things.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

3. Sharon should tell the security officer who Jill is because then other people will think that they too, should be allowed to break the law and not be punished.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

4. Sharon should tell the security officer who Jill is because when someone has broken the law, a citizen is supposed to report it.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

5. Sharon should tell the security officer who Jill is because Jill needs to learn that stealing is wrong or to make her suffer or pay for the wrong she did.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:
PART 3  Reasons Why Sharon Should Not Tell

Read each statement aloud to your group. Next, rate the statement in terms of being a
good/strong reason or a weak reason. If the statement is something your group agrees with you
might rate it highly (for example a 4 or a 5), if you think the statement is weak, then you might
rate it a 1 or a 2.

1. Sharon should not tell the security officer who Jill is because Sharon might
   bring problems on herself if she gets mixed up in this whole shoplifting
   situation.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

2. Sharon should not tell the security officer who Jill is because if Jill is punished,
   then Sharon won’t be around to be her friend. Their friendship would fall apart.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

3. Sharon should not tell the security officer who Jill is because Jill is not a full-
   time criminal. She can now get on the right path and stop shoplifting.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:

4. Sharon should not tell the security officer who Jill is because basically, Jill is a
   good person and contributes a lot to her friendship with Sharon.
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   Reason:
5. Sharon should not tell the security officer who Jill is because Sharon should have a heart and consider how Jill felt. After all, it’s stressful being a teenager with no money, especially when there is so much pressure to dress in the latest styles.

1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

Reason:
Part 4
Best Reasons Why Sharon SHOULD Tell on Jill

Now, look back over the statements and choose the statements that your group thinks are the strongest or best arguments.

The best argument is statement number ____ because

The second best argument is number ____ because

The third best argument is number ____ because

Best Reasons Why Sharon SHOULD NOT Tell on Jill

The best argument is statement number ____ because

The second best argument is number ____ because

The third best argument is number ____ because
Appendix O

Dilemma Discussion Procedure

(Berkowitz, 1993)
I. LARGE GROUP PREPARATION. Before the moral discussion can begin, the group must be prepared for this new procedure. It should simply not be “dumped” on them without explanation. (5 minutes)

A. RATIONALE. Offer the group a rationale for the moral discussion. Explain what you will be doing and why. For example, tell them that you will be discussing social problems to help them learn better ways to figure out solutions to such problems.

B. ESTABLISH GUIDELINES. There must be a certain type of atmosphere in the group if moral discussion will succeed. Most importantly, trust and respect must be established. This is not different from what ideally should be the atmosphere in any classroom or other youth group. Rules need to be established for peer interaction (e.g., no ridicule, if participants are to feel free and comfortable to be open and honest).

C. PHYSICAL ARRANGEMENT. Ideally everyone in the group should be able to see the face of everyone else in the group, optimally in a large circle format.

D. TRAIN DISCUSSION SKILLS. This is an optional preparation stage. We typically assume that kids already know how to engage in peer discussion (see Appendix I for discussion guidelines). This is not accurate. If possible, it is helpful to teach relevant discussion skills as well as reasoning skills.

II. CONFRONT THE DILEMMA. Once the group is prepared for the moral discussion activity, the next step is simply to present the dilemma to the group and engage in the initial processing of the dilemma. (5-10 minutes)

A. PRESENTATION. First, the dilemma must be presented to the group. There are numerous ways of doing so, and the choice depends purely on the style of the leader and the resources available, as well as the level of the group. For the purpose of the present investigation, the dilemma will be read aloud to the group by the facilitator and then reread by the group members once they have been divided into smaller groups.

B. DISCUSSANT RECAPITULATION. It is important to not assume that the dilemma has been received and comprehended in the way that you desire or expect. You must check the group’s comprehension of the presented dilemma. Ask the group to:
   1. GIVE DEFINITIONS OF TERMS USED IN THE DILEMMA.
   2. CLARIFY AND SUMMARIZE DETAILS IN THE DILEMMA.
   3. DEMONSTRATE THEIR COMPREHENSION OF THE PLOT.
   4. STATE THE CENTRAL PROBLEM AND ACTION CHOICES.

III. FORMULATE INITIAL POSITION. Once you are confident that the group comprehends the dilemma, then you are ready to begin the discussion of the dilemma.
The first step in this direction is to solicit the formulation of an initial moral judgment by the group members. This is done both privately and publicly. (10 minutes)

A. **PRIVATE REFLECTION.** Ask group members to think quietly about the dilemma and the action choices available to the protagonist.

B. **SELECT AN ACTION CHOICE.** Instruct group members to choose what they think the protagonist should do.

1. **WRITE AN ACTION CHOICE.** Instruct group members to write their action choice on an index card or piece of paper.

C. **SELECT JUSTIFICATIONS.** Instruct group members to choose the best reason for their action choice. You may ask them for more than one reason or for the best reason for each action choice.

1. **WRITE JUSTIFICATION(S) DOWN.** Instruct group members to record their chosen justification(s) on the same index card or piece of paper, beneath the already recorded action choice.

IV. **RANDOMLY ASSIGN STUDENTS TO SMALLER DISCUSSION GROUPS.** Have students break into smaller (5 students per group) groups before sharing their action choice. (10 - 15 minutes)

A. **INDICATE CHOICES TO GROUP.** Ask group members to orally share their choice.

B. **INDICATE JUSTIFICATIONS TO GROUP.** Ask group members to reveal their justifications for their action choices. This must be done individually and orally.

C. **GIVE BEHAVIORAL GOALS.** The tasks specified should include clear behaviorally-defined goals. These include:

   a. **DECIDE ON BEST CHOICE AND REASON.** Instruct each small group to reach agreement on the single best action choice and the best reason for that action choice.

   b. **DECIDE ON BEST REASONS FOR EACH CHOICE.** Instruct group members to reach agreement on the best reason for each of the action choices expressed by group members in step III.

D. **SMALL GROUP MEMBER ROLES.** Either assign or ask the group to assign necessary roles for the accomplishment of the small group tasks.

   a. **RECORDER.** A member to write the group’s decisions down.

   b. **REPORTER.** A member to report the group’s decisions to the
entire large group.

c. **TASK LEADER.** A member who ensures the group is on task. The task leader ensures that the discussion remains focused on the dilemma, that each group member is fulfilling his or her duties, and that the group is adhering to the timeline as outlined by the researcher.

E. **FACILITATE DISCUSSION.** The discussion leader should circulate among the small groups and facilitate their accomplishment of the small group tasks.

V. **FULL GROUP DISCUSSION.** Students are reunited into a large group format which should represent the bulk of the moral discussion procedure. (5-10 minutes)

A. **SMALL GROUP REPORTS.** The reporter from each small group shares orally the findings from his or her small group discussion (i.e., the consensus reached within the group as to the moral action choice and the justification supported by the group members.

B. **FACILITATE DISCUSSION.** What may be the group leader’s most important role is to guide the full group discussion of the moral dilemma under consideration.

1. **CRITICAL ELEMENTS.** There are three critical elements that a discussion leader must focus on:

   a. **MORALITY.** The discussion must predominantly focus on the issues of right and wrong, not on issues of probability or psychological predictions. It is acceptable to allow digressions periodically, but the leader must guide the discussants back to the issue of what ought to be done.

   b. **JUSTIFICATION.** The discussants must both offer their justifications for their action choices and reflect on others’ justifications. The leader must elicit justifications for offered action choices and guide discussants to consider each other’s justifications, not merely their respective action choices.

   c. **PEER INTERACTION.** The power of peer moral discussion is in the cognitive interactions of the peer discussants. It is often tempting for both the leader and discussants to lapse into a series of parallel dialogues between the leader and each of the discussants. The leader must guide the discussants to consider and reason about each other’s points of view. Ideally, the discussion should be composed purely of discussants talking to each other about their respective moral justifications.
2. **USE PROBES.** The most valuable tools the leader has in successfully guiding the discussion are the probe questions. There are eight types of probe questions. All probes can be spontaneously generated to fit the ongoing discussion. However, the last three types of probes should also be prepared in advance for the specific dilemma under discussion.

a. **PERCEPTION CHECKS** (e.g., Mary, will you tell me in your own words what Sheila said?"")
b. **INTER-STUDENT PARTICIPATION PROBES** (e.g., “Mary, what do you think of what Charles just said?”)
c. **DEFINITION REQUESTS** (e.g., “Mary, what do you mean by justice?”)
d. **ROLE-SWITCH PROBES** (e.g., Mary, you mentioned that Jill would want her friend to lie to protect her. Would the store owner want her to lie?”)
e. **REASONING ELICITATIONS** (e.g., Mary, you said that you think Jill shouldn’t expect her friend to lie for her. Why do you think she shouldn’t?”)
f. **ISSUE PROBES**
g. **UNIVERSAL-CONSEQUENCE PROBES** (e.g., Mary, what would it be like if everyone decided to break the law when they felt it was justified?”)
h. **COMPLICATING PROBES**

3. **CONCLUSION/SUMMARY.** The facilitator should facilitate closure of the dilemma discussion by asking students to summarize (globally) what was discussed.

Source: Adapted from Berkowitz (1993, pp. 18-25).
Appendix P

Sample Story for the Nonmoral Discussion Group (NMDG)
Suddenly there was a grinding of brakes, a sickening crash, and a tinkle of breaking glass. All was in a turmoil. People were running towards the corner and when I arrived, I had to stand tip-toe to see over the heads of the crowd. With one wheel off, radiator pushed in, and fenders crumpled, against a telephone pole lay an expensive limousine. As the crowd stood in dead silence, the police pulled the driver out of the wreckage. The injured man seemed painfully but not dangerously hurt. I am a bit of a lip-reader and I distinctly saw one officer move his lips framing the words, "She's in the backseat. She's not hurt. We've got to get her out but she doesn't want any publicity."

Working with your fellow group members, answer the questions that follow. Remember, the most important thing about this activity is that everyone contributes to the discussion. Make sure you discuss your answers with everyone in your group before writing anything down.

Questions

1. What does your group think about the title of this short story? On a scale of 1-5 (with 1 being 'terrible' and 5 being 'great'), how would you rate the title?

   1  2  3  4  5

   Reason:

2. Can your group think of a better title?

   Our new title is:
3. We don't know who was in the backseat of the limousine. Can your group invent a character? Who is this "mystery woman"?

4. Where was this "mystery woman" going?

5. Why do you think the "mystery woman" wants to avoid publicity?

6. Limousines are generally very visible vehicles. That is, they are easy to spot on the road. What or who do you think caused this accident?
7. Because you are in Grade 6 or 7 you are not yet able to drive. However, what advice would you give to someone just learning to drive? Can your group think of 5 driving rules that everyone should follow?

1)

2)

3)

4)

5)
Appendix Q

Sample Dilemma for the Moral Reflection Group (MRG)
Sharon's Dilemma

Sharon and her best friend Jill walked into a department store to shop around. As they browsed, Jill saw a sweater she really liked and told Sharon she wanted to try the sweater on. While Jill went to the dressing room, Sharon continued to shop.

Soon Jill came out of the dressing room wearing her coat. She caught Sharon's attention with her eyes and glanced down at the sweater under her coat. Without a word, Jill turned and walked out of the store.

Moments later, the store security officer, sales clerk, and the store manager approached Sharon. "That's her, that's one of the girls. Check her bags." blurted the clerk. The security officer said he had the right to check bags and Sharon handed them over. "No sweater in here," he told the manager. "Then I know the other girl has it," the clerk said, "I saw them just as plain as anything. They were together on this." The security officer then asked the manager if he wanted to follow through on the case. "Absolutely," he insisted, "shoplifting is getting to be a major expense in running a store like this. I can't let shoplifters off the hook and expect to run a successful business."

The security officer turned to Sharon. "What's the name of the girl you were with?" he asked. Sharon looked up at him silently. "Come on now; come clean," said the security officer, "If you don't tell us, you can be charged with the crime or with aiding the person who committed the crime."

PART 1

1. Should Sharon tell the security officer who the "other girl" is? Why or why not?
   I think that Sharon
   because


PART 2  Reasons Why Sharon Should Tell

Read each statement that follows. Next, rate the statement in terms of being a good/strong reason or a weak reason. If the statement is something you agree with you might rate it highly (for example a 4 or a 5); if you think the statement is weak, then you might rate it a 1 or a 2. For each statement you must give a reason for your decision.

1. Sharon should tell the security officer who Jill is because if Jill finds or starts to see that she can get away with stealing, she might try to shoplift again.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

   Reason:

2. Sharon should tell the security officer who Jill is because a good citizen does not lie to the police (or to security officers) or do other bad things.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

   Reason:

3. Sharon should tell the security officer who Jill is because then other people will think that they too, should be allowed to break the law and not be punished.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

   Reason:

4. Sharon should tell the security officer who Jill is because when someone has broken the law, a citizen is supposed to report it.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

   Reason:
5. Sharon should tell the security officer who Jill is because Jill needs to learn that stealing is wrong or to make her suffer or pay for the wrong she did.

1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong

Reason:
PART 3  Reasons Why Sharon Should Not Tell

Read each statement that follows. Next, rate the statement in terms of being a good/strong reason or a weak reason. If the statement is something you agree with you might rate it highly (for example a 4 or a 5), if you think the statement is weak, then you might rate it a 1 or a 2.

1. Sharon should not tell the security officer who Jill is because Sharon might bring problems on herself if she gets mixed up in this whole shoplifting situation.
   
   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   
   Reason:

   2. Sharon should not tell the security officer who Jill is because if Jill is punished, then Sharon won't be around to be her friend. Their friendship would fall apart.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   
   Reason:

   3. Sharon should not tell the security officer who Jill is because Jill is not a full-time criminal. She can now get on the right path and stop shoplifting.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   
   Reason:

   4. Sharon should not tell the security officer who Jill is because basically, Jill is a good person and contributes a lot to her friendship with Sharon.

   1 very weak  2 weak  3 neither strong nor weak  4 strong  5 very strong
   
   Reason:

   5. Sharon should not tell the security officer who Jill is because Sharon should have a heart and consider how Jill felt. After all, it's stressful being a
teenager with no money, especially when there is so much pressure to dress in the latest styles.

1 very weak 2 weak 3 neither strong nor weak 4 strong 5 very strong

Reason:

Part 4

Best Reasons Why Sharon SHOULD Tell on Jill

Now, look back over the statements and choose the statements that you think are the strongest or best arguments.

The best argument is statement number ____ because

The second best argument is number ____ because

The third best argument is number ___ because
Best Reasons Why Sharon SHOULD NOT Tell on JILL

The best argument is statement number ___ because ____________________________.

The second best argument is number ___ because ____________________________.

The third best argument is number ___ because ____________________________.

Good Job - You're done!
Appendix R

Sample Story for the Nonmoral Reflection Group (NMRG)

Once, when it began to snow, three brothers decided they would make the biggest snowman their village had ever seen. All three rolled their snowballs bigger and bigger, and bigger still. When each ball got too big for one to push, two pushed, then all three together. When they couldn’t move the biggest of the three balls anymore, they stopped.

The brothers tried to lift and stack the second ball on top of the first, but they could not. They had done such a good job of making them big that they were too heavy to lift. They were beginning to scrape the snowballs down to make them smaller when their grandfather came home.

"Aren’t you doing that backward?" he asked.

When they explained their problem, their grandfather said, "You don’t need less. You need more." And he told them what to do.

By the time their supper was ready, the boys had finished making the biggest snowman their village had ever seen. It was as tall as all three boys sitting on one another’s shoulders. How could they have done this? (Shannon, 1991)

**Questions**

**Part 1**

Read the short story “The Snowman” and answer the questions that follow. You may look back at the story at any time. Should you have any questions please ask the researcher at the front of the class.

1. **Do you understand this story? YES ____ NO ____  
   If you answered YES to this question please go to question #2. If you answered NO, please read the story a second time and then answer question #2.

2. **What was the puzzle or problem that required solving in this short story? (describe it)**

   ____________________________
   ____________________________
   ____________________________
   ____________________________
   ____________________________
3. What is your solution to the puzzle or problem presented in the story? (How do you think the characters in the story figured out their problem?)

**SOLUTION:**

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

Now give as many reasons for your solution as possible. Your job is to convince me that your solution would work. Write down as many reasons as you can to support your solution.

I think my solution would work because:

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

__________________________________________________________________________

**STOP:** When you are finished please lift your hand and your group leader will give you Part 2.
Part 2

Here is a different solution to “The Snowman” story you just read. Read the solution and then answer the questions that follow.

Solution

Recall that the boys in “The Snowman” had created huge snowballs that were too heavy to lift. Without a solution they would be unable to build their snowman. Here is a solution to their problem.

The “more” their grandfather told them about was to pack a ramp of snow against the biggest ball of snow. Their second snowball was too heavy to lift, but not too heavy to roll uphill. After building the snow ramp higher and rolling up the third snowball, they simply dug away the ramp and left their snowman standing.

Questions

1. “This solution sounds reasonable and would likely work quite well.”
   My reaction to this is:

2. “The grandfather must be pretty smart to have figured out such a solution.”
   My reaction to this is:

3. “The boys would be able to use the grandfather’s suggestion very easily.”
   My reaction to this is:

4. How is this solution different from the solution you proposed?
   The differences are that