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**CLASSROOM-BASED EMPATHY TRAINING:
AN EVALUATION OF PROGRAM EFFECTS IN AN ELEMENTARY SCHOOL**

**BY
KIMBERLY SHERMAN**

**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE OF**

DOCTOR OF PHILOSOPHY

**IN
PSYCHOLOGY**

UNIVERSITY OF RHODE ISLAND

2008

Abstract

Universal classroom-based social skills and violence prevention training is currently a topic of widespread interest. Although there is a growing body of empirical support for some existing social skills programs, less is known about contributions of specific program components to intervention outcomes. Empathy training is one common component of social skills curricula that has been subject to relatively little research. The current study is a single-school quasi-experimental investigation of *Second Step* empathy training effects on 57 first- and fourth-graders. Dependent variables included self-reported empathy, teacher-reported social skills, teacher-reported problem behaviors, and fourth-graders' self-reported social skills. The study also explored teachers' use of social-emotional teaching strategies, assessed with a brief self-report frequency measure, and their perceptions of program effects and procedures, solicited in follow-up interviews. Results suggest that intervention and comparison students, as a group, did not differ in pre-post effects on quantitative measures of empathy, social skills, or problem behaviors. However, additional exploratory analyses suggest that first grade intervention students may have maintained pre-intervention levels of teacher-reported social skills, while first grade comparison students declined. Intervention teachers reported an increase in use of social-emotional teaching strategies and positive perceptions of program effects and procedures. Strengths and limitations of the study as well as implications for future research and practice are discussed.

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Statement of the Problem

Empathy, an emotional response triggered by recognition of another's emotional or physical state, plays an important role in children's social development. Children's empathy has been shown to predict prosocial behaviors such as helping, comforting, sharing, and cooperating (Eisenberg & Miller, 1987; Litvack & McDougall, 1997; Roberts & Strayer, 1996). Research also suggests that empathy predicts academic achievement, perhaps because it facilitates the formation of supportive relationships at school (Feshbach & Feshbach, 1987; Izard et al., 2001; Zins, Bloodworth, Weissberg, & Walberg, 2004). Additionally, some research suggests that empathy may inhibit or mitigate aggressive behaviors by enabling accurate interpretations of social cues, and by stimulating personal distress and/or sympathetic concern in the potential instigator (Bjorkqvist, Osterman, & Kaukiainen, 2000; Hastings, Zahn-Waxler, Robinson, Usher, & Bridges, 2000; Kaukiainen, Bjorkqvist, Osterman, & Lagerspetz, 1996; Miller & Eisenberg, 1988; Richardson, Hammock, Smith, Gardner, & Signo, 1994; Strayer & Roberts, 2004). Moreover, empathy and other social skills deficits may contribute to the bullying, violence, and antisocial behaviors that threaten school climate and safety in many communities (Fitzgerald & Edstrom, 2006).

To address these concerns schools have implemented a variety of programs aimed at promoting empathy and prosocial behavior. Often referred to as character education, bullying-prevention, or social-emotional skills training, these efforts vary widely in their content, organization, implementation, theoretical grounding, and empirical support. Recently, many schools have adopted multi-tiered positive behavior support models, in which universal instruction in and reinforcement of expected behaviors and social norms

forms the core of the school's primary prevention system. Data on student response to universal programming is used to identify students as well as school routines or locations (e.g., classrooms, bus line) in need of more intensive behavior supports (Sugai, Horner, Dunlap, Heineman, Lewis, Nelson, Scott, Liaupsin, Sailor, Turnbull, Turnbull, Wickam, Ruef, & Wilcox, 2000). The adoption of multi-tiered, data-driven behavior support models has heightened interest in empirically supported universal interventions designed to teach social skills and prevent problem behaviors school-wide.

Although schools have implemented a variety of universal social skills programs, many have not been thoroughly evaluated, and very few studies have examined the impact of empathy-training curricula using specific measures of children's empathy, although the limited research available is promising (Feshbach & Feshbach, 1982; Terge, Ole-Yohan, & Arve, 2001). *Second Step: A Violence Prevention* program is a pre-kindergarten through ninth grade classroom-based curriculum, which includes three units: empathy-training, impulse-control, and anger management (Committee for Children, 2002). Although there is a growing body of empirical support for the program's effects on social skills and problem behaviors, there is little research on the empathy-training unit alone or on specific empathy outcomes (Grossman, Neckerman, Koepsell, Liu, Asher, Beland, Frey, Rivara, 1997). Moreover, existing studies investigating *Second Step* empathy outcomes have lacked comparison groups, limiting researchers' capacity to address causality.

The current study is an attempt to address these gaps in the literature by providing a quasi-experimental pre-post comparison group investigation of *Second Step* empathy training effects on students' empathy as well as general social skills and problem

behaviors. The research involved implementation of the *Second Step* empathy training unit in one first and one fourth grade classroom, with a second first and fourth grade classroom forming the comparison group. Pre-post measures of self-reported empathy, teacher-reported social skills, and teacher-reported problem behaviors were administered in both grades; fourth-graders completed an additional self-report social skills measure. Additionally, the research explored teachers' use of social- emotional teaching strategies, and their perceptions of program effects and procedures.

The following chapter provides a review of the literature on empathy, including its conceptual history, measures, relationship to relevant constructs, and developmental considerations. Additionally the literature review addresses empathy training programs and *Second Step* evaluation research, with attention to existing gaps in the literature. Research questions and hypotheses investigated in the current study follow the literature review.

Background and Rationale for the Current Study

Conceptual History of Empathy

The English word “empathy” was coined in 1909 by psychologist Edward Titchener, who translated it from the German *eingefühlung*, which literally means “feeling into” (Preston & de Waal, 2002). In nineteenth century Germany, *eingefühlung* referred to the projection of human emotion onto art or nature (e.g., perceiving a red painting as angry) (Verducci, 2000). German philosopher Theodore Lipps is credited with introducing the concept to psychology in the early twentieth century by using it to describe an interpersonal process in which observation of another’s emotion triggers the experience of that emotion in the observer (Preston & de Waal, 2002).

Some psychologists (e.g., Aderman & Berowitz, 1970; Stotland, 1969) conceptualize empathy as a primarily affective process characterized by the experience of emotion appropriate to another’s situation, although others have extended the definition of empathy to include cognitive processes, such as perspective taking and active interpretation of physical and situational emotion cues (e.g., Feshbach, 1975; Davis, 1994; Eisenberg, Spinrad, & Sadovsky, 2006). Many researchers acknowledge both dimensions and define empathy as vicarious emotional arousal activated by understanding of another’s emotional state or condition (Eisenberg, Spinrad, & Sadovsky, 2006). The empathizer’s emotion must be appropriate to the target individual’s situation and the empathizer must be able to recognize his or her separateness from the target. Mere affect matching without any self-other distinction, a phenomenon that occurs in infancy, is considered a developmental precursor to empathy (Zhou, Valiente, & Eisenberg, 2003). Unlike sympathy, which is an emotional response

to another's negative emotion, empathy can be experienced in response to both positive and negative emotions (Zhou, Valiente, & Eisenberg, 2003).

Empathy Measures

Literature on empathy measures, reviewed below, sheds light on the nature of the empathy construct, and highlights researchers' efforts to address the challenges involved in its assessment.

Adult Measures

Empathy in adults has traditionally been measured via self-report questionnaires, such as the Emotional Empathic Tendency Scale (EETS), in which adults rate their level of agreement with items such as, "It is hard for me to see how some things upset people so much" (Mehrabian & Epstein, 1972). A revised version of the EETS, the 30-item Balanced Emotional Empathy Scale (BEES) is commonly used in current research on adult and late adolescent empathy (e.g., Shapiro, Morrison, & Boker, 2004; Singer, Seymour, O'Doherty, Kaube, Dolan, & Frith, 2004). As on the EETS, BEES respondents rate their level of agreement with items such as, "It upsets me to see someone being mistreated" and "I easily get excited when those around me are lively and happy" (Mehrabian, 1997). The BEES has high internal consistency, a high correlation with the EETS and significant negative correlations with scales of aggression and violence, suggesting construct validity (Mehrabian, 1997). Another widely-used adolescent and adult self-report empathy measure, the Interpersonal Reactivity Index (IRI), includes four subscales tapping: vicarious emotional responding, sympathy, personal distress, and perspective taking (Davis, 1994). Evidence suggests that these adult questionnaires are psychometrically sound in the general adult population, however some researchers

caution that adults' desire to view themselves as consistent with their own values can impact self-report responses on empathy measures (Zhou, Valiente, & Eisenberg, 2006).

Child Measures

Prior to the 1980s, researchers studying empathy in children typically assessed empathy with picture-story measures, such as Feshbach & Roe's (1968) Affective Situations Test for Empathy (FASTE) (cited in Zhou, Valiente, & Eisenberg, 2006). On the FASTE children listened to a brief emotional story while viewing corresponding slides and were then asked to report their own feelings. The level of congruence between the characters' feelings and children's self-reported feelings was used to assess empathy.

In the 1980s, researchers raised questions about the psychometric properties of picture-story empathy measures. Meta-analyses of studies investigating relationships between empathy and prosocial or aggressive behavior, have found no relationship between picture-story empathy measures and prosocial or aggressive behavior. Other empathy measures, however, such as self-report questionnaires, were related to prosocial behavior and correlated negatively with aggression (Eisenberg & Miller, 1987; Miller & Eisenberg, 1988).

Researchers have identified several disadvantages to picture-story measures. Some point out that these measures rely too heavily on children's expressive verbal skills (Miller & Eisenberg, 1988). And even if they do have strong verbal skills, young children may not be accurate reporters of their emotional reactions to stories (Eisenberg, Spinrad, & Sadovsky, 2006). Additionally, the stories may be too short to elicit a genuine emotional response and the interpersonal demand of the picture-story interview format

may elicit socially desirable response patterns (Zhou, Valiente, & Eisenberg, 2003).

Some researchers have attempted to assess empathy using indices of facial reactions and physiological responses during administration of picture/story measures or films (Eisenberg & Fabes, 1990). Researchers have found that preschool and elementary school children's heart rate typically accelerates while watching films designed to elicit distress or mild fear and decelerates while watching films designed to elicit empathic sadness (Eisenberg & Fabes, 1990). Additionally, preschool and elementary children tend to display facial sadness during film clips intended to elicit sadness and facial fear during film clips meant to elicit fear (Eisenberg & Fabes, 1990).

If facial and physiological reactions reflect empathy, they should correlate with theoretically relevant constructs. Eisenberg & Fabes (1990) reported some empirical support for a relationship between facial and heart rate indices and helping behavior. For children who viewed a film designed to elicit empathic sadness, heart rate deceleration was associated with higher levels of helping on a subsequent charity task, while heart rate acceleration predicted lower levels of helping. Facial displays of sadness predicted helping for boys, but not girls (Eisenberg & Fabes, 1990). However, in a meta-analysis, Eisenberg & Miller (1988) found no significant correlation between scores on facial measures of empathy and scores on aggression measures. They caution that positive facial expressions in response to negative situations are difficult to interpret. Although positive facial expressions (e.g., smiling) may reflect enjoyment of another's distress, such expressions could also signal discomfort (Eisenberg & Miller, 1988). Moreover, children can mask or neutralize facial expressions (Eisenberg & Fabes, 1990). And although physiological responses are unlikely to be influenced by social desirability, they

may be affected by the measurement equipment itself (Zhou, Valiente, & Eisenberg, 2003).

In studies of infants and toddlers, researchers often use physical and behavioral observations to assess empathy or its developmental precursors. For example, researchers have recorded crying, facial expressions, and non-nutritive sucking rates to measure infants' responses to other infants' cries and to adults' facial expressions (Sagi & Hoffman, 1976; Field, Woodson, Greenberg, & Cohen, 1982; Dondi, Simion, & Caltran). Other studies have used mothers' and researchers' descriptions of toddlers' reactions to naturally occurring and simulated distress (Zahn-Waxler, Radke-Yarrow, and King, 1979; Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992).

To assess school-age children's empathy, many contemporary researchers use self-report questionnaires. Bryant's Index of Empathy for Children and Adolescents (BIE) is a 22-item measure for children ages six and older (Bryant, 1982; see Appendix I for full list of items). The BIE was adapted from Mehrabian and Epstein's (1972) adult empathy scale. Children rate their agreement with statements such as, "It makes me sad to see a boy who can't find anyone to play with" and "I get upset when I see an animal being hurt" (Bryant, 1982). Children below seventh grade respond using a yes/no format. Older children and adolescents can either use the yes/no format or a nine-point response format indicating their level of agreement. Items can be read aloud and group-administered, while children read along and respond using a paper and pencil format. To reduce the possibility of response errors in young children, the scale can also be individually administered with children placing cards into boxes marked "Me" or "Not Me" (Bryant, 1982).

Bryant (1982) reported test-retest reliabilities of .74 for first-graders, .81 for fourth-graders, and .83 for seventh-graders. She also found that seventh-graders scored higher than fourth-graders, supporting expected developmental changes in empathy. BIE scores did not correlate significantly with scores on reading achievement or social desirability scales, providing support for discriminant validity (Bryant, 1982). Bryant (1982) also reported strong correlations between seventh-graders' BIE scores and EETS scores. First-graders' BIE scores were moderately correlated with the FASTE picture-story measure. Researchers have also reported significant negative correlations between BIE scores and aggressive or disruptive behavior (Bryant, 1982; de Wied, Goudena, & Matthys, 2005).

The Griffith Empathy Measure (GEM) is a recently developed and validated parent-report adaptation of the BIE (Dadds et al., 2008). Parents indicate the degree to which modified BIE items, restated in the third person, are true of their child.

Gresham and Elliott's (1990) Social Skills Rating System (SSRS) includes an empathy sub-scale on the elementary and secondary student self-report forms. The elementary empathy sub-scale includes ten items tapping respondents' behavior (e.g., "I listen to my friends when they talk about problems they are having") and affect (e.g., "I feel sorry for others when bad things happen to them") (Gresham & Elliott, 1990). Students respond to each item by indicating the frequency (*never, sometimes, often*) with which they exhibit each response (Gresham & Elliott, 1990; see Appendix J for full list of items).

Researchers have identified several advantages of questionnaire measures over picture-story and picture-story plus facial or physiological measures. Administration ease

and efficiency is one key advantage. Additionally, picture-story and facial affect measures assess reactions to specific stories or vignettes, while questionnaires assess general emotional responses to a wider range of situations (Eisenberg & Miller, 1987; Zhou, Valiente, & Eisenberg, 2003). Moreover, a person must change emotions quickly to respond to the changing stimuli presented with picture-story and facial affect measures, a requirement that may not reflect the emotional demands of everyday situations (Miller & Eisenberg, 1988). And unlike picture story measures, child and adult questionnaire measures of empathy have been found to correlate positively with prosocial behavior and negatively with aggression (Eisenberg & Miller, 1987; Miller & Eisenberg 1988).

Relationship to Behavior

A growing body of literature investigates children's empathy and its relationship to prosocial behavior, aggression, and other externalizing and antisocial behaviors. The theory supporting an empathy-prosocial behavior link posits that children's capacity to recognize and experience another's positive emotion enables them to engage in positive social interactions, and their ability to recognize and feel concern for another's distress facilitates helping behavior (Roberts & Strayer, 1996). Additionally, some hypothesize that empathy enables children to accurately interpret social cues, thereby avoiding distorted hostile attributions, which can lead to aggressive responses. Moreover, some theorize that empathy can mitigate aggression by stimulating empathic distress in the potential instigator (Feshbach, 1984). The studies reviewed below investigated relationships between empathy and aggressive or prosocial behavior.

Relationship to Aggression

Some of the empathy-aggression research reveals mixed results, with effects varying depending on age and/or type of measure. In a meta-analysis of 49 studies with children, Miller and Eisenberg (1988) found that empathy had an overall low-to-moderate correlation with aggression, externalizing, and antisocial behaviors. The relationship was not consistent across studies. Significant negative relationships were likely when empathy was assessed with questionnaire methods, but not with facial indices, picture-story measures, or experimental induction. (Picture-story measures correlated negatively with aggression, if preschoolers were left out of the analysis). Since preschoolers' empathy was typically measured with self-report picture story measures, the researchers were unable to determine whether these age effects reflected true age differences in the empathy-aggression relationship, or merely age differences in reliability of emotional self-reports. Given that empathy with negative, and not positive, emotions is more likely to mitigate aggression, and most studies did not differentiate between types of empathy, the authors cautioned that their findings might underestimate the strength of the empathy-aggression relationship (Miller & Eisenberg, 1988).

A recent review of 17 studies exploring the relationship between affective empathy and aggression revealed mixed results among studies with child participants, and more consistent negative relationships in adolescent studies (Lovett & Sheffield, 2006). The authors proposed that differences in measures used in child and adolescent studies may partially account for the inconsistent findings. Studies of children were more likely than adolescent studies to use measures tapping self-distress, a variable associated with low levels of self-regulation, and therefore higher levels of aggression. Additionally,

the authors found that adolescent studies employing behavior measures of empathy were more likely to find greater effects than studies relying on self-report measures, perhaps because response biases influenced self-reports. They also discussed the complexity of the empathy-aggression relationship, noting that although empathy with another's distress may inhibit aggression, vicarious anger might also predict conflict or aggression (Lovett & Sheffield, 2006). Their review focused only on affective dimensions of empathy, however, so the role of cognition in an individual's interpretation of affect was not discussed.

Strayer and Roberts (2004) investigated the relationship between empathy, including affective and cognitive dimensions, and aggression. They assessed empathy in 24 five-year-olds using parent, teacher, and child ratings, and child interviews tapping both affect matching with characters in videotaped vignettes, and cognitive attributions of their own emotions. Each participant was assigned to a same-sex playgroup of four unacquainted peers. Aggression was assessed using direct observations of playgroups during laboratory play sessions. The researchers found a negative relationship between empathy and both verbal and physical aggression. They also noted that anger and aggression did not covary, suggesting that the relationship between empathy and aggression was not mediated by anger (Strayer & Roberts, 2004).

Relationship to Prosocial Behavior

In a meta-analysis exploring the relationship between empathy and prosocial behavior, Eisenberg and Miller (1987) found low-to-moderate positive relationships. However, as in the empathy-aggression studies, the relationship differed depending on the measure used. When subjected to meta-analysis, prosocial behavior was not

significantly related to picture-story indices of empathy, although it showed significant correlations with other types of empathy measures (e.g., questionnaire measures, other report measures, facial indices, experimental simulations or inductions). In addition to the previously described concerns with picture-story measures, the researchers pointed out that the empathy object in a picture-story measure (the picture stimulus) was not also a potential recipient of prosocial action (Eisenberg & Miller, 1987). They argued that a stronger relationship between empathy and prosocial behavior is more likely to occur when the empathy object is also a potential target for prosocial action, as in experimental simulations. Additionally, the researchers found stronger associations between empathy and prosocial behavior in adults than in children. They suggested that coordination of emotions and behavior may improve with age, as older individuals are better at interpreting vicarious affect and more skilled in carrying out helpful behaviors than young children (Eisenberg & Miller, 1987). The researchers also noted that correlations between empathy and prosocial behavior were likely to be high when ratings were provided by the same individual, whereas cross-source correlations were more likely to result in moderate relationships. They cautioned that raters may not adequately distinguish empathy from prosocial behavior and recommended using more conservative cross-informant correlations (Eisenberg & Miller, 1987).

In response to these measurement concerns, recent studies of empathy-behavior relationships typically employ multi-source, multi-method measures. In one correlational study, researchers found a significant link between empathy and prosocial behavior, but their results suggest that the nature of the relationship is affected by gender. Strayer and Roberts (1996) assessed empathy in 73 five-, nine-, and 13-year-olds, using self-report

ratings on the BIE, peer ratings, teacher ratings, as well as facial and verbal self-report measures of affect matching with characters in videotaped vignettes. Parent, teacher, and friend ratings, and laboratory measures were used to assess prosocial behavior. They found that boys' empathy strongly predicted a range of prosocial behaviors (e.g., helping an adult, cooperating with unfamiliar peers, turn-taking with friends), while the predictive power of girls' empathy was weaker and limited to prosocial behavior with friends (Roberts & Strayer, 1996). The researchers speculated that socialization differences accounted for gender effects, with girls facing more pressure than boys to exhibit prosocial behavior, regardless of empathic feelings (Roberts & Strayer, 1996).

In a similar study of 478 second-, fourth-, and sixth-graders, researchers investigated the correlation between empathy, measured by a modified IRI, and altruism, measured by teacher- and self-report ratings, as well as laboratory measures of time volunteered and money donated after viewing a film about a struggling family helped by a charitable organization (Litvack-Miller & McDougall, 1997). Although effects were small, the researchers found that empathic concern and perspective-taking predicted prosocial behavior, even after controlling for social desirability (Litvack-Miller & McDougall, 1997).

Development

Given the importance of empathy to social development, and the widespread interest in raising empathic children, it is important to understand how empathy develops and what adults can do to promote it. This section will review research on biological, developmental, and environmental contributions to the development of empathy.

Additionally, this section will review existing literature on *Second Step* and other empathy-related curricula.

Biological Factors

Heritability and innate capacity. Several child and adult twin studies have found that monozygotic twins are more similar on empathy measures than dizygotic twins, suggesting that genes play a role in empathy (Zahn-Waxler, Robinson, & Emde, 1992; Matthews, Batson, Horn, & Rosenman, 1981; Rushton et al., 1986). Additional evidence for biological bases comes from research on newborns' emotional responsiveness. Research suggests that human newborns appear to recognize and respond appropriately to others' cries and facial expressions (e.g., by crying in response to others' cries and by matching adults' facial expressions) indicating a possible innate capacity for empathy (Sagi & Hoffman, 1976; Dondi, Simioin, & Caltran, 1999; Field et al., 1982). Innate capacity, however, does not guarantee that empathy will develop and manifest appropriately later in childhood or adolescence. Therefore it is important to understand how environmental factors, such as parenting and school programs, can affect empathy development. School and parent factors will be discussed later in this review.

Temperament. Temperament refers to an individual's typical pattern of emotional and behavioral responding (Thomas & Chess, 1977). Although it has strong biological and genetic bases, temperament can be changed through experience. Research indicates that an easy or sociable temperament is associated with empathic responding, and inhibited or difficult temperaments are linked to lower empathy (Young, Fox, & Zahn-Waxler, 1999; Robinson et al., 1994). In the context of another's distress, children with behaviorally inhibited response styles may experience personal fear or anxiety,

prompting avoidance and preventing empathic responding (Young et al., 1999). Since sociability reflects interest in others, it makes sense that children with this orientation are likely to appear more empathic. Given that temperament research is correlational, however, findings should be viewed with caution. Children with different temperaments are likely to have different experiences and to elicit different responses from others. Additionally, since emotional and behavioral patterns associated with temperament can change with experience, temperament alone does not set the course for children's empathy.

Developmental Changes

Emotion recognition in babies. Research on developmental changes in children's empathy suggests that, over time, there are quantitative and qualitative changes in children's expressions of empathy (Hoffman, 2000). Children's development of empathy begins with simple emotion matching and self-distress in response to others' distress. Newborns discriminate and imitate facial expressions, and express distress in response to other newborns' cries, suggesting innate empathic capacities (Sagi & Hoffman, 1976; Field et al., 1982; Dondi, Simion, & Caltran, 1999). As babies grow older, they continue to recognize and respond appropriately to caretakers' emotions. In one study, one-year-olds were more likely to crawl across a visual cliff if their mothers, at the opposite "deep end" of the table, were making happy, rather than fearful, facial expressions (Sorce et al., 1985). By the end of their first year, most babies use social referencing, seeking cues about how to behave, from caretakers' facial expressions. Their capacity to recognize and interpret facial expressions is an important component of empathy.

Emergence of comforting behaviors. Although babies may distinguish and react to others' emotions, they do not try to comfort (or provoke) others until they develop self-awareness, usually during the second year. Over a 12-month period, mothers in one study observed and recorded their babies' reactions to distress that they observed or caused in others (Zahn-Waxler et al., 1992). As one-year-olds, the babies typically responded to others' distress with personal distress, but over the course of the year, the researchers found an increase in other-oriented empathic and helping behaviors. Researchers found that 13-15-month-olds displayed empathy physically by, for example, making worried faces or patting others. Between the ages of 18-25 months, children begin to use words to comfort others, offering reassurances such as, "You be OK" (Zahn-Waxler et al., 1992, p.129).

As they mature, children are increasingly able to understand feelings and their causes, and to help or comfort others with actions and words. While preschoolers can use words to identify basic emotions, school-age children can identify an increasingly wide range of emotions, and explain their causes with greater sophistication (Lagatutta & Wellman, 2001). The ability to identify a wide range of emotions, and understand their causes, enables children to empathize with increasingly complex emotions as they grow older. Bryant (1982) found that seventh-graders scored higher on self-report empathy measures than fourth- and first-graders, suggesting that empathy continues to increase in adolescence (Bryant, 1982).

Although age is associated with increased understanding of others' feelings and greater competence in executing prosocial behaviors, beginning in toddlerhood, a child's growing understanding of others' feelings also includes an awareness of how to *provoke*

distress. Since self-other distinctions that emerge in toddlerhood also enable antisocial behaviors, this development alone does not guarantee that children will develop and express empathy appropriately (Hughes & Leekam, 2004). Moreover, some researchers have found that gender affects the direction of developmental trends in empathy. In one study, researchers found that in girls, empathy for both other girls and boys increased steadily from the ages of 10 to 16. For boys, however, the researchers found that the sex of the empathy object affected the nature of the developmental trend. Boys' empathy for girls continued to increase between the ages of 10 and 16, while their empathy for other boys declined (Olweus & Endresen, 1998). Evidence that maturation alone does not guarantee a steady increase in empathy highlights the need to consider environmental variables, discussed later in this review, which can affect empathy development.

Perspective-taking. Perspective-taking skills also enhance a child's capacity to recognize and understand others' feelings. As children approach school-age, their theory of mind, or understanding of others' mental states, typically emerges and improves, a development which may facilitate understanding of others' feelings. In one study, preschoolers with high scores on a role-taking measure were more likely to comfort a distressed younger sibling when left alone in a waiting room (Steward & Marvin, 1984). Additionally, research indicates that young children attend primarily to salient external features of people or situations. As children develop, they are better able to reflect on others' inner experiences. This shift in perspective-taking enables them to provide internal, as opposed to situational-only, explanations for others' feelings. In a cross-sectional study of three-to-seven year-olds and young adults, researchers found that six- and seven-year-olds and adults were more likely than younger children to explain

storybook characters' feelings in terms of prior events, memories, or thoughts (e.g., a bunny makes a character sad because it reminds her of her lost dog), while younger children were more likely to focus on salient events in the immediate context (Lagattuta & Wellman, 2001).

Theory of mind skills, or the ability to make inferences based on others' internal states, may also contribute to social functioning in older children. In one study, preadolescents' scores on theory of mind measures were strongly related to scores on a peer-reported social interaction scale, in which classmates rated each other's competence in tasks such as helping peers with problems, and representing the class in expressing sympathy to a sick school employee (Bosacki & Astington, 1999).

Although theory of mind developments may increase capacity for empathy, Hughes and Leekam (2004) note that, "the social implications of developments in children's understanding in mind are far from being uniformly positive" (p. 6). As children's theory of mind improves so to might their sensitivity to criticism, ability to mask intentions and manipulate situations, and capacity to engage in relational aggression (Hughes & Leekam, 2004). Normal developments in theory of mind do not guarantee appropriate expressions of empathy or prosocial behavior. Therefore, it is important to understand how environmental factors, such as parenting and school-based programming, may affect children's empathy and related abilities.

Environmental Factors

Parenting. Research indicates that parenting behaviors influence children's development of empathy. Zahn-Waxler, Radke-Yarrow, and King (1979) investigated whether differences in 16 toddlers' altruism and reparation behaviors were related to

maternal rearing differences. Children's behavior was assessed via observations of their responses to natural and simulated distress. Researchers also observed the mothers and rated their empathic care giving on dimensions of warmth and responsiveness. The researchers found that children were more likely to show concern for another's distress when the mother responded to the distress by offering an affective explanation or a principle as opposed to a simple prohibition. The authors speculated that emphatic explanations convey importance and that explanations help children generalize to other situations. Children whose mothers frequently offered prohibitions without explanations were unlikely to comfort others, possibly because their experiences with frequent prohibitions promoted inhibition in response to others' distress. The researchers also observed that children sometimes displayed the same comforting behaviors that their mothers used, suggesting that modeling influenced the children's responses to distress.

Similar relationships between parenting styles, empathy, and helping behaviors have been found in older children. In one study, sixth- and seventh-graders whose parents used inductive discipline were more empathic and more helpful than children whose parents used punishment or love-withdrawal (Krevans & Gibbs, 1996). In a similar study, adolescents who displayed high levels of reasoning about justifications for helping others had parents who encouraged empathic responding and prosocial behavior (McDevitt, Lennon, & Kopriva, 1991).

Alternately, children who are abused are more likely than non-abused peers to respond inappropriately to peer distress. In one study, based on behavioral observations in a day care center, abused preschoolers responded to peer distress with indifference, mechanical patting, fear, distress, aggression or a combination of comforting and distress.

Non-abused disadvantaged children, however, displayed appropriate comforting responses (George & Main, 1985). The authors suggest that evidence of impairment in maltreated children's empathic responding supports the role of parental warmth and nurturing in fostering the development of empathy.

Research suggests that parental warmth, inductive discipline, and encouragement of empathic responding, promote the development of empathy in children. Since these findings come from correlational studies, however, they cannot conclusively address causality and directionality. More experimental and quasi-experimental studies are needed to address questions of causality. Additionally, since school is a major context for development, and teachers, like parents, differ in their styles of addressing social-emotional concerns, it is important to also investigate the impact of school factors on children's empathy.

Early classroom-based empathy training. Early attempts to implement and evaluate empathy-training programs were carried out in the seventies (Feshbach & Feshbach, 1982). At that time, some researchers were developing theoretical and empirical support for relationships between empathy, prosocial behavior, and aggression (Feshbach, 1984; Staub, 1971). Empathy was thought to facilitate prosocial behaviors and to inhibit aggression by enabling potential instigators to recognize and vicariously experience others' pain or distress (Feshbach, 1984). In one experimental study, kindergartners who role-played needing help and providing help to a distressed peer, subsequently demonstrated more helping and sharing behaviors than controls who did not receive the role play training (Staub, 1971). Staub (1971) speculated that the role play

training increased children's capacity to empathize with others in need, as well as their capacity to perform helpful behaviors.

Feshbach and Feshbach's (1982) elementary school-based empathy training program also included an emphasis on role playing and imagining others' preferences and view points. Additionally, their program focused on emotion recognition activities, such as identifying feelings expressed in photos, films, and tape-recorded conversations. In an experimental field test, the researchers found that aggressive and non-aggressive third- and fourth-graders who participated in the empathy-training demonstrated significantly greater increases in sensitivity to others' feelings, helping, cooperation, and generosity, than children who participated in a problem-solving or a no-intervention condition.

Contemporary school-based programs. Recently, growing concerns about violence and bullying, coupled with an increased understanding of the importance of emotional and behavioral adjustment to school success, have led to the development and widespread use of school-based empathy and social-skills training programs (Raver, 2002). These programs are often taught by classroom teachers or counselors for half an hour to two hours a week and they typically use brief discussion, modeling, role plays, and adult and peer feedback to teach emotion knowledge, adaptive thinking styles, and prosocial behavior. Meta-analyses of social skills training programs have revealed small to moderate significant effects on participants' social skills and antisocial behaviors, although most of the existing research explores targeted, rather than universal implementations (Ang & Hughes, 2002; Losel & Beelmann, 2006). This section will review existing research on social skills programs with empathy-training or related components, highlighting gaps in the literature and directions for future research.

One study investigated the effects of a year-long school-based social-cognitive training program on 104 Norwegian 14- and 15-year-olds' self-reported empathy (Manger, Eikeland, & Asbjornsen, 2001). Participants included students with and without emotional and behavioral problems. The program was taught by classroom teachers for three hours per week and focused on multiple objectives, including emotion management, problem solving, a variety of social skills, negotiation, and adaptive self-talk. Skills were taught and practiced through discussion, modeling, role play, and feedback. The researchers found that intervention students showed significant pre-post effects on self-reported empathy measures, while comparison students did not exhibit significant increases (Manger, Eikeland, & Asbjornsen, 2001). The researchers argued that their results illustrate the promise of school-based programs to enhance students' empathy.

Studies of elementary programs are also encouraging. One universal prevention program, Promoting Alternative Thinking Strategies (PATHS), is a pre-K-5 curriculum designed to be implemented by classroom teachers three times a week in 20-30 minute lessons (Greenberg, Kusche, Cook, & Quamma, 1995). Lessons focus on self-control, emotional and interpersonal understanding, and interpersonal problem-solving. Stories, photographs, feeling faces, and puppets, illustrate the lessons' main ideas. In one randomized experimental study, researchers found that intervention children improved on measures of emotion recognition and understanding, and social problem-solving (Greenberg et al., 1995).

In addition to universal prevention programs, some schools offer targeted interventions for children who display social or emotional difficulties or for those identified as at-risk. The FAST-Track program, for example, is a long-term prevention

program for children in grades 1-6 who are at-risk for developing conduct problems. FAST-Track, which can be implemented as a complement to a universal classroom program, provides targeted social skills training and academic tutoring as well as parenting classes and biweekly home visits. Facilitators lead manualized social skills lessons in the form of discussions, stories, role-plays, and cooperative activities to small groups of five or six children. A longitudinal study of 891 first- through third-graders found that Fast-Track intervention children scored significantly higher than controls, who participated in PATHS alone, on a measure of social problem-solving, and they made significantly fewer hostile attributions about peers on a measure of hostile attribution bias (the Conduct Problems Prevention Research Group, 2002). Although research on PATHS and FAST-Track does include specific social skills measures, there is no research on how individual curricular units or program components contribute to program outcomes.

The *Second Step: A Violence Prevention Curriculum*, for grades pre-K-9, is another classroom-based curriculum for which there is emerging empirical support. With roots in social learning and cognitive behavioral theory, *Second Step* lessons incorporate observation and modeling, reflection and discussion, role-play, feedback, and training in adaptive self-talk (Committee for Children, 2002). The curriculum is divided into three units: empathy-training, impulse control, and anger management, with five to eight lessons in each unit, depending on the grade. In the elementary grades, the empathy unit focuses on recognizing feelings, perspective-taking, and expressing appropriate emotional support or concern for others. The impulse-control unit teaches calm-down techniques, respectful strategies for joining a group or initiating conversation, and strategies for resisting peer pressure and the impulse to lie or steal. The anger-

management lessons focus on identifying anger and its triggers, and applying anger-management and problem-solving strategies to deal with situations such as, receiving criticism, feeling left out, and making a complaint.

Lessons are story-based and outlined on the back side of large photo cards that accompany each lesson. This allows teachers to refer to the lesson outline, while simultaneously displaying the visual. The photo cards show children exhibiting emotions (e.g., fear, surprise) or engaged in conflicts or social situations (e.g., two children want to use a microscope at the same time). Some lessons include a brief video segment, in which children model responses to social situations. Preschool and kindergarten lessons also include puppet role plays. In a typical lesson, the teacher introduces the scene on the photo and asks children to describe how they think each character feels and what clues help them identify these feelings. Then children are asked to reflect on and discuss a time when they felt similar to one of the children on the photo card. They may also be asked to think about and share how their bodies felt when they were experiencing that emotion. Next, children might be prompted to think about possible solutions (e.g., how one child could comfort another, or how one child could express his feelings to another). Children are then guided through a process for evaluating and selecting possible solutions or action steps. They are encouraged to ask themselves whether the potential solution is safe, fair, likely to work, and how it might make others feel. In many lessons, teachers model a particular skill or process (e.g., adaptive self-talk) by performing a role-play with a volunteer. Then children break into pairs or small groups to role play responses to a given situation, such as witnessing a peer fall off a bike (Committee for Children, 2002; scope and sequence for the first and fourth grade empathy-training units are provided in

Appendices P and Q). Generalization is addressed via multiple exemplars, discussions about when students might apply *Second Step* skills during the course of their day, posters that outline problem-solving and calm-down strategies, and parent letters. An optional family guide video is also available.

Existing research on *Second Step* suggests that the program has a moderate effect on children's social-emotional knowledge and functioning. Grossman et al. (1997) conducted a randomized study of 790 second and third grade students at six matched pairs of urban and suburban schools in Washington State. *Second Step* was implemented in one of each pair of schools, while the other school served as a control. Data collectors, blind to children's intervention status, conducted behavioral observations of a subsample (n=588) at three time points: pre-intervention, two weeks post-intervention, and six months post-intervention. Observations were conducted in classrooms, cafeterias, and playgrounds. Based on these observational data, intervention students showed moderate decreases in physical aggression and increases in prosocial behavior, while physical aggression increased in the control group. Parent and teacher behavior ratings did not show a significant difference between intervention and control groups. The researchers speculated that parents and teachers may not be sensitive to subtle changes in behavior, particularly changes that manifest during unstructured out-of-classroom activities, such as lunch or recess.

Taub (2001) evaluated *Second Step's* impact on social competence and antisocial behavior in 54 third through fifth-graders in a rural Vermont elementary school. Twenty-eight students from a nearby school formed the comparison group. Teachers completed a behavior rating scale for each child at three time points: pre-intervention, post-

intervention, and at a one-year follow-up. Observers also completed behavioral observations of each participant at all three time points, coding for: appropriate engagement with peers, responsiveness to adult directives, adherence to classroom rules, peer fighting, and bothering peers. Results of these observations were somewhat mixed. At times two and three, the intervention group had a significantly higher frequency of following adult directions than the comparison group. The comparison group, however, showed significant improvement in engaging appropriately with peers between time one and time two, while the intervention group declined. Results of teacher ratings were more encouraging. At the intervention school, teacher ratings showed significant improvement in social competence at time two and three, and significant declines in antisocial behavior at time three. Taub (2001) speculates that intervention students may have acquired new prosocial skills more quickly than they discontinued antisocial behaviors.

There is also research investigating program effects on younger children. Using a pre-post no-control design, McMahon, Washburn, Felix, Yakin, and Childrey (2000) investigated the impact of *Second Step* on at-risk urban preschool and kindergarten students' social skills, problem behavior, and curriculum knowledge. Participants included 56 preschoolers (ages three to five) and 53 kindergarteners (ages four to seven) attending a school serving Chicago public housing residents. All participants qualified for free lunch. The program was implemented in classrooms by teachers and teachers' aids in collaboration with researchers or graduate student assistants. Immediately prior to and following implementation of the 28-lesson curriculum, trained psychology students assessed children's knowledge of the curriculum using *Second Step's* semi-structured interview measure. Additionally, social skills and problem behaviors were assessed pre

and post-intervention with teacher ratings on the Social Skills Rating System (SSRS). Finally pre-post behavioral observations were conducted in classrooms; observers coded for disruptive behavior, verbal aggression and physical aggression.

McMahon et al. (2000) found mixed results on the teacher ratings. There were no significant changes on the SSRS social skills scores. The SSRS problem behaviors scores decreased over time for the preschoolers, but increased over time for the kindergarteners. On the curriculum knowledge measure, however, both preschoolers and kindergartners displayed increased knowledge in recognizing feelings, understanding how children might respond to conflicts, and speculating about outcomes of potential responses. Moreover, behavioral observations revealed a significant post-intervention decrease in all three types of problem behavior for the preschoolers and kindergartners; the decrease in disruptive behavior was greater in the kindergarteners than in the preschoolers. The researchers argue that their findings support the use of *Second Step*, but that further studies with control groups are needed to address causality.

McMahon and Washburn (2003) evaluated *Second Step* outcomes in middle-schoolers, using a sample of 156 African American fifth- through eighth-graders in two inner-city Chicago schools. All children in the study participated in *Second Step* at school; there was no control group. The researchers found significant pre-post increases in self-reported empathy, as measured by an unpublished five-item self-report survey. Moreover, increases in empathy predicted declines in self-reported aggression. The researchers also found increases in teacher-reported prosocial behavior, and in self-reported knowledge and skills, assessed with *Second Step's* multiple choice survey. Results were complicated, however, by significant school and school-time interaction

effects, indicating that contextual factors may have contributed to outcomes. Although participants in both schools improved in empathy, there was a significantly greater increase for participants from School B, suggesting that contextual factors affected outcomes. Additionally, the authors pointed out that the absence of a control group raises questions about causality.

In another pre-post no-control study, Edwards, Hunt, Meyers, Grogg, and Jarrett (2005) studied the impact of *Second Step* on 455 fourth and fifth-graders from a small urban school district. This study was unique in its investigation of individual units. The researchers modified *Second Step*'s assessment of curriculum knowledge to develop a distinct measure for each unit: empathy, impulse-control, and anger management. They administered the measures pre- and post-implementation of each unit, for a total of six administrations. The researchers found significant pre-post increases in knowledge of all three areas, although effect sizes were small. The researchers also conducted semi-structured student and teacher interviews to explore treatment acceptability and generalization issues. Both teachers and students expressed approval for the program, perceived it to be effective, and supported continued implementation. Students were able to name specific skills learned and cite examples of times that they had used their skills both in and out of school, as well as times that they had discussed the program with their parents. As the authors noted, reliability and validity data for their measures is unavailable and their design lacked a comparison group. Their results are encouraging, but the research limitations and the dearth of similar studies underscore the need for further research.

Conclusions

Much research suggests a positive relationship between empathy and prosocial behavior and a negative relationship between empathy and aggression (Eisenberg & Miller, 1987; Miller & Eisenberg, 1988; Roberts & Strayer 1996; Strayer & Roberts 2004). Accordingly, school-based social skills and violence-prevention curricula often incorporate empathy training. A growing body of research documents the positive effects of school-based social skills curricula, such as *Second Step*, on students' social skills and problem behaviors. However, few studies have investigated the impact of the *Second Step* empathy-training unit on empathy, specifically. Moreover, methodological limits of existing studies include lack of comparison groups, and use of empathy measures with unknown psychometric properties. Based on this review of the literature, there is a need for additional research evaluating the effects of the empathy training unit alone on students' empathy, as well as on more global measures of social skills and problem behaviors.

This quasi-experimental pre-post comparison group study will investigate the impact of the *Second Step* empathy training unit on first- and fourth-graders' empathy, social skills, and problem behaviors. The research questions are provided below.

Research Questions

1. Do intervention and comparison students differ significantly on pre-post effects on empathy, social skills, or problem behaviors?
2. Are first- and fourth-graders differentially impacted by time or intervention on measures of empathy, social skills, or problem behaviors?

3. Do teacher perceptions of program goals, effects, and procedures support the social validity of the program?

Research Hypotheses

1. Intervention students would show significantly greater pre-post effects than comparison students on measures of empathy, social skills, and problem behaviors.

Rationale: *Second Step* lessons rely on strategies (modeling, observation, role play, and feedback) that have been found effective for teaching social skills. Moreover, previous research has documented significant *Second Step* effects on measures of social skills, problem behaviors, and empathy or related constructs (Grossman et al., 1997; McMahon & Washburn, 2003; Taub, 2001). Finally, although there have been some mixed findings, research has documented positive relationships between empathy and prosocial behavior and negative relationships between empathy and aggression/ anti-social behaviors. Therefore, if empathy training is expected to be effective in increasing students' empathy, it is reasonable to also expect increases in prosocial skills and decreases in problem behaviors.

2. First-graders will show greater gains in empathy and social skills than fourth-graders.

Rationale: First grade is a critical year for teaching students school expectations and classroom social norms. Prior research has shown that first grade classroom-based interventions and classroom contextual variables can have modest effects on functioning through the middle school years, indicating that this is a sensitive

time to intervene (Ialongo, Poduska, Werthamer, & Kellam, 2001; Kellam, Ling, Merisca, Brown, & Ialongo, 1998). Additionally, prior research on the developmental course of empathy suggests that younger children tend to have lower levels of empathy than older children, which may mean that they have more potential for learning in this domain (Bryant, 1982). Moreover, from a developmental perspective, six and seven-year-olds are beginning to use and improve perspective-taking skills, so they may be especially receptive to empathy training. Finally, given prior research that boys' empathy for other boys actually declines between the ages of 10 to 16, program goals might run counter to a development trend in older boys, making it somewhat harder to achieve desired effects with this age group (Olweus & Endresen, 1998).

3. Intervention teachers will report positive perceptions of program goals, procedures, and effects.

Rationale: Teachers are aware that social-emotional difficulties can interfere with instruction and learning, whereas students' empathy and prosocial behavior help support an effective learning environment. Therefore, goals that target improvement in students' social-emotional functioning are likely to be acceptable to teachers. Additionally, a variety of program features (e.g., minimal preparation time, pre-made non-consumable materials) conform to characteristics associated with treatment acceptability to teachers. Moreover, since prior research has documented positive program effects on student skills, knowledge, and behavior, it is reasonable to predict that teachers will perceive some positive effects from the current implementation (Grossman et al., 1997; McMahon & Washburn,

2003; Taub, 2001). Further, prior research has documented teacher approval for the program (Edwards et al., 2005).

The following chapter describes methods used to investigate these research questions and hypotheses.

Methods

Research Design

This study used a single-school quasi-experimental pre-post comparison group design. To minimize disruption to the school setting, the research relied on the use of intact classroom groups, not random assignment. The pre-post comparison group design was selected for its potential to reduce threats to internal validity, the extent to which a study can establish a causal relationship between independent and dependent variables. The comparison group was included to address potential internal validity threats, such as maturation and repeated testing. Since both intervention and comparison groups experience maturation and repeated testing in a pre-post study, effects that emerge in the intervention group alone are less likely to be due to these variables (Campbell & Stanley, 1963). Likewise, pre-post measures were used to allow for pre-intervention comparisons of intervention and comparison groups, as well as an assessment of change over time, procedures that permit exploration of causality and directionality.

Independent variables included treatment condition (*Second Step* intervention or comparison group) and grade level (first or fourth). Dependent variables included first- and fourth-graders' teacher-reported social skills, teacher-reported problem behaviors, and self-reported empathy. An additional dependent variable was the fourth-graders' self-reported social skills. Teacher self-report frequency data on use of social-emotional teaching strategies was also collected. Finally, qualitative data on teacher perceptions of program effects and procedures was obtained in a semi-structured interview.

Site Selection

The study was conducted in one Rhode Island coeducational Catholic elementary school. The school was recruited through the principal. Criteria for site selection included (a) principal and teacher acceptance of the *Second Step* curriculum and the research procedures, (b) no previous exposure to *Second Step* for students in the selected grade levels and, (c) at least two first- and two fourth-grade classes, allowing for intervention and comparison groups at the desired grade levels.

Participants

All four participating teachers were white and female. Their years of teaching experience ranged from 1-14. Participating students included 57 children (30 fourth-graders and 27 first-graders). The student sample included 26 boys and 31 girls. Students in one first grade class (15 students) and one fourth grade class (15 students) formed the intervention groups, while students from the other first- (12 students) and fourth-grade classes (15 students) formed the comparison groups. As shown in Table 1, the first grade comparison group had five boys and seven girls; all other groups had seven boys and eight girls. At Time 1, child participants ranged in age from 6.4 to 10.5 years. Mean age of first-graders was 7.1 and mean age for fourth-graders was 10.2. The ethnic background of the student sample was 93% white, 3.5% Latino, and 3.5% Asian.

Procedures

Informed Consent and Assent

Institutional Review Board (IRB) approval was obtained from the University of Rhode Island in February 2007. Informed teacher consent, parent permission, and child assent procedures were followed in compliance with IRB standards. The IRB-approved

parent permission forms were sent home with every first- and fourth-grader (Appendix A & B). Students who returned signed permission forms had the opportunity to provide informed assent; the informed assent letter was read aloud to the children by the researcher, who provided opportunities for them to ask questions (Appendices C & D). Teachers were asked to read the informed consent form and were provided opportunities to ask questions about the project and their involvement (Appendices E & F).

Sixty percent of parents consented to their children's participation, and 100% of those children ($n = 58$) assented to participate. One child transferred schools prior to the start of the intervention, bringing the final number of child participants to 57.

All four teachers provided informed consent. Teachers were compensated with \$20 gift certificates to a local business of their choice for completing Time 1 measures, and \$25 gift certificates for completing Time 2 measures.

Preparation and Matching

Prior to implementing the curriculum, teachers reviewed the curriculum materials with the researcher and completed a brief intervention acceptability checklist (Appendix M). The purpose of collecting this data was to enable the researcher to match classrooms to treatment conditions in a manner that reduced the possibility that intervention teachers would be more enthusiastic about using the curriculum in the first place. Teachers also completed a brief nine-item measure assessing the frequency with which they used social-emotional instructional strategies emphasized in *Second Step* (Appendix N). This measure allowed the researcher to investigate potential pre-existing differences in teachers' use of social-emotional teaching strategies. At Time 1 same-grade teachers did not differ significantly in intervention acceptability ratings or in self-reported use of

social-emotional teaching strategies. Classrooms were therefore randomly matched to treatment conditions.

Curriculum Implementation

The *Second Step* empathy training unit was implemented in two classrooms (one first and one fourth grade), with two additional same-grade classrooms as comparisons. Comparison students participated in the curriculum later in the year, following data collection, to ensure that they received the same potential benefit as intervention students. There were eight lessons in the first grade empathy unit and seven in the fourth grade unit; lessons were 30-45 minutes and were implemented weekly by the researcher in collaboration with the classroom teacher. Lessons focused on the following skills: feeling identification, perspective-taking, and showing concern for others. Each lesson was introduced with a large photo card depicting a child or children displaying emotions or engaged in social situations. Lessons included live and/or video modeling of target skills, discussion, role play, and other active practice opportunities, followed by peer and adult feedback.

Data Collection

Quantitative teacher and student self-report data were collected pre-intervention during a three-week period in February and March 2007 (Time 1) and post-intervention during a two-week period in May 2007 (Time 2). Additionally, intervention teachers completed a self-report of the frequency of social emotional teaching strategies four weeks into the intervention and following the final lesson. Each intervention teacher also participated in a follow up interview three weeks after intervention completion.

Measures

Student and teacher-report measures were used because children's behavior can vary in different contexts and because children and teachers may have different perspectives on the child's feelings and behavior. Self-report measures are important because children have many social experiences that occur outside of close adult supervision. Additionally, some social constructs, such as empathy, have internal cognitive and affective dimensions not easily observed by others.

Bryant's Index of Empathy

First- and fourth-graders completed Bryant's Index of Empathy (BIE) (Bryant, 1982) pre- and post-intervention. On this measure children indicated whether or not each of 22 statements was true of them (e.g., "It makes me feel sad when I see a girl who can't find anyone to play with") (Bryant, 1982; See Appendix I). The BIE was group-administered and read aloud to fourth-graders, who responded in a paper and pencil yes/no format. The measure was individually administered to first-graders; children responded by placing cards in envelopes marked "Me" or "Not Me," as recommended by Bryant (1982). Bryant (1982) reported test-retest reliabilities of .74 for first-graders, .81 for fourth-graders, and .83 for seventh-graders. BIE scores did not correlate significantly with scores on reading achievement or social desirability scales, providing support for discriminant validity (Bryant, 1982). Bryant (1982) also reported strong correlations between seventh-graders' BIE scores and scores on the EETS adult empathy scale. First-graders' BIE scores were moderately correlated with the FASTE picture-story measure. Researchers have also reported significant negative correlations between BIE scores and aggressive or disruptive behavior (Bryant, 1982; de Wied, Goudena, & Matthys, 2005).

Social Skills Rating System Self-Report

Fourth-graders completed the Social Skills Rating System (SSRS) (Gresham & Elliott, 1990) pre- and post-intervention. The SSRS is a standardized, norm-referenced multi-rater assessment of children's social behavior (Gresham & Elliott, 1990). The Student Elementary questionnaire, designed for grades three through six, includes 34 items, describing prosocial behaviors such as, "I try to understand how my friends feel when they are angry, upset, or sad" (Gresham & Elliott, 1990; See Appendix J). Children are asked to rate how often (*never, sometimes, or very often*) they engage in each behavior. Administration time is approximately 20 minutes. A principal components analysis of 2,407 students' ratings resulted in four factors, or subscales: Empathy (concern for others' feelings and views), Cooperation (helping, sharing, and complying), Assertion (initiating social behaviors), and Self-Control (compromising and responding appropriately to conflicts) (Gresham & Elliott, 1990). The Student Elementary form has been shown to have good internal consistency (coefficient alpha = .83) and adequate test-retest reliability (.68) (Gresham & Elliott, 1990). First-graders did not use this measure because it is not designed for children below third grade.

Social Skills Rating System Teacher-Report

Teachers in both the intervention and control classrooms completed the SSRS Social Skills and Problem Behavior scales pre- and post-intervention (see Appendices K & L). The Social Skills scale includes 30 items and three subscales: Cooperation, Assertion, and Self-control. The Problem Behaviors scale includes 18 items with Internalizing, Externalizing, and Hyperactivity subscales. Teachers were asked to rate how often each student engaged in the behavior described in each item and how

important each behavior is to success in their classrooms. The SSRS teacher form has been shown to have very good internal consistencies (alpha = .94 for social skills, .88 for problem behaviors, and .95 for academic competence) and very good test-retest reliabilities (alpha = .85 for social skills, .84 for problem behaviors, and .93 for academic competence) (Gresham & Elliott, 1990). Additionally, evidence supports the construct validity of the teacher form. The authors also found strong correlations between the Teacher-SSRS Problem Behaviors scale and the teacher form of the Child Behavior Checklist (.81) and between the SSRS social skills scale and the Harter's Teacher Rating Scale (.70) (Gresham & Elliott, 1990).

Social-Emotional Learning Checklist

Both intervention and comparison teachers completed the *Second Step* Social-Emotional Learning Checklist (SELK) pre-intervention and post-intervention (Appendix N). Additionally, intervention teachers completed this measure after four weeks of curriculum implementation. The *Second Step* SELK is a nine-item measure on which teachers indicate on a four-point scale (*never, once, 2-3 times, or 4+ times*) the frequency with which they discussed, modeled, or prompted children to use social-emotional learning strategies in the past week. For example, one item reads, "I intervened in a student conflict by asking students to report how the other party felt" (Committee for Children, 2004). The teacher social-emotional learning checklist was one tool for addressing threats to internal validity, such as the possibility of preexisting differences in intervention and comparison teachers' emphasis on social-emotional learning. Additionally, this information was collected to improve understanding of the nature and scope of the intervention that children were exposed to (e.g., lessons alone, or lessons

plus additional classroom applications). Since reinforcement of skills and concepts outside of intervention time is important for skill generalization and maintenance, the SELC was intended to provide one measure of contextual factors that might affect student outcomes (DuPaul & Eckert, 1994). This measure was administered mid-unit only in the intervention rooms because it is a recommended component of *Second Step* implementation. Administering it in the comparison classrooms may have cued comparison teachers to use strategies that they would not ordinarily use.

Teacher Interview

Two weeks after the curriculum unit was completed, intervention teachers participated in a brief semi-structured interview with the researcher in which they were asked to discuss their impressions of how *Second Step* participation impacted their students and how procedures might be improved for future implementation (Appendix O). Classroom-based intervention use and integrity increase when teachers find implementation procedures acceptable and perceive beneficial, meaningful outcomes (Elliott, Witt, & Kratochwill, 1991; Gresham, 1996). Therefore, social validity data are an important component of an intervention evaluation. Additionally, the interview was intended to provide teachers with the opportunity to discuss observations not assessed in the Teacher-SSRS or captured in the aggregate data, as well as to provide face-to-face closure for their participation in the research project.

Data Analysis

Preliminary Testing

A preliminary two-way multivariate analysis of variance (MANOVA), with two grade levels (first and fourth) and two treatment conditions (intervention and

comparison), was conducted to test for group differences at Time 1 on Teacher-SSRS Social Skills, Teacher-SSRS Problem Behaviors, and BIE scores. Fourth grade Time 1 Self-SSRS Social Skills scores were subjected to a preliminary one-way analysis of variance (ANOVA) to investigate initial differences between the intervention and comparison groups. Additionally, Pearson product-moment correlations were calculated to explore the relationships among the student self- and teacher-report data.

Hypothesis Testing

During hypothesis testing, two three-way ($2 \times 2 \times 2$) repeated measures analyses of variance (ANOVA) were conducted to assess intervention effects on Teacher-SSRS Social Skills and Teacher-SSRS Problem Behaviors. Independent between-subjects variables included two treatment conditions (intervention and comparison) and two grades (first and fourth). The dependent repeated-measures variables were pre- and post-intervention scores on Teacher-SSRS Social Skills and Teacher-SSRS Problem Behaviors.

To control for pre-intervention treatment group differences that emerged on BIE scores, Time 2 BIE scores were subjected to a two-way Analysis of Covariance (ANCOVA) with Time 1 scores entered as a covariate. The between groups independent variables were grade level (first vs. fourth) and treatment condition (intervention vs. control).

Additionally, the fourth-graders' Self-SSRS Social Skills scores were subjected to a two-way (2×2) repeated measures ANOVA with two levels of treatment (comparison and treatment) and two (pre-post) SSRS completion times.

Intervention teachers' interview responses were written by the researcher, summarized, and included as a supplement to the quantitative results. Results are presented in the next chapter.

Results

Preliminary Analyses

A preliminary two-way multivariate analysis of variance (MANOVA), with two grade levels (first and fourth) and two treatment conditions (intervention and comparison), was conducted to test for group differences at Time 1 on Teacher-SSRS Social Skills, Teacher-SSRS Problem Behaviors, and BIE scores. There were no Time 1 group differences on any SSRS variables. Specifically, results revealed no significant Time 1 differences in Teacher-SSRS Social Skills between treatment groups $F(1, 53) = .06, p > .05$ or grade levels $F(1, 53) = .13, p > .05$, and there was no significant grade by treatment interaction, $F(1, 53) = 1.07, p > .05$. Likewise, there were no significant Time 1 differences in Teacher-SSRS Problem Behaviors between treatment conditions $F(1, 53) = .45, p > .05$ or grade levels $F(1, 53) = .02, p > .05$, and there was no significant treatment by grade interaction $F(1, 53) = .28, p > .05$.

There were also no significant differences in Time 1 BIE scores between grade levels $F(1, 53) = .05, p > .05$, nor was there a significant grade by treatment interaction $F(1, 53) = .64, p > .05$. However, results revealed a significant difference at Time 1 in mean BIE scores between the overall treatment and comparison groups $F(1, 53) = 5.54, p < .05$. To adjust for this difference in Time 1 scores, an ANCOVA was employed during hypothesis testing for self-reported empathy with Time 1 BIE scores entered as a covariate.

Fourth grade Time 1 Self-SSRS Social Skills scores were subjected to a preliminary one-way analysis of variance (ANOVA) to investigate initial differences

between the treatment and comparison groups. Results indicated that the two groups did not differ at Time 1 $F(1, 28) = .004, p > .05$.

Teachers did not differ significantly on their pre-intervention perceptions of treatment acceptability, as measured with the brief treatment acceptability checklist (Appendix M). On this measure, teachers rated the acceptability of seven program features on a five-point scale from *strongly agree* to *strongly disagree*. Overall, ratings indicated high levels of pre-intervention treatment acceptability ($M=1.3$). Mean ratings were 1.1 (first grade intervention teacher), 1.3 (first grade comparison teacher), 1.4 (fourth grade intervention teacher), 1.3 (fourth grade comparison teacher).

Correlations

Pearson product-moment correlation coefficients were used to investigate relationships between and within BIE, Teacher-SSRS, and Self-SSRS data. See Tables 6-11 for a full display of correlations; some highlights are described below. According to Cohen's (1988) guidelines, there was a strong positive correlation between fourth-graders' BIE scores and Self-SSRS empathy scores at pre-intervention [$r=.81, n=30, p<.01$] and post-intervention [$r=.82, n=30, p<.01$] providing support for the convergent validity of both measures. Additionally, there was a large positive correlation between fourth-graders' Self-SSRS cooperation scores and their Self-SSRS empathy scores at pre- [$r=.61, n=30, p<.01$] and post-intervention [$r=.79, n=30, p<.01$]. Self-SSRS cooperation scores were moderately correlated with BIE scores at pre-intervention [$r=.47, n=30, p<.01$] and strongly correlated at post-intervention [$r=.54, n=30, p<.01$]. BIE scores did not correlate with Teacher-SSRS variables, but there were some significant cross-source SSRS correlations. For example, fourth-graders' post-intervention Self-SSRS social skills

scores were moderately correlated with Teacher-SSRS social skills scores [$r=.37$, $n=30$, $p<.05$].

Teacher-Reported Social Skills

Teacher-SSRS Social Skills scores were subjected to a three-way mixed ANOVA with two treatment conditions (intervention and comparison), two grade levels (first and fourth) and two times (pre- and post-intervention). Preliminary checks were conducted to test the Teacher-SSRS Social Skills data for violations of normality, homogeneity of variance, and homogeneity of intercorrelations. The Kolmogorov-Smirnov goodness of fit test revealed that Time 2 scores for fourth-graders in the treatment group violated the assumption of normality, $D(15) = .27$, $p < .05$, as did Time 2 scores for first-graders in the comparison group, $D(12) = .24$, $p < .05$, which means that these scores did not conform to a normal distribution. Although normal distributions are ideal, violations of normality are common and the F test is relatively robust to them. Levene's test for equality of error variances was significant at Time 1, $F(3, 53)=5.47$, $p<.05$, and at Time 2 $F(3, 53) = 3.68$, $p < .05$, indicating that the variance of Teacher-SSRS Social Skills scores was unequal across groups. Variance, or the squared standard deviation, measures spread of scores from the mean. As shown in Table 2, standard deviations for fourth grade scores were greater than for first grade scores, which may indicate grade level differences in within group variability on social skills, and/or grade-level differences in teachers' implicit frame of reference while completing the measures. Box's Test of Equality of Covariance Matrices was also significant, $F(9, 27,002) = 4.26$, $p < .05$, indicating that correlations between the Time 1 and Time 2 scores were not the same for each level of

the treatment and grade variables. To address these violations, a more conservative alpha level (.01) was used for the hypothesis testing analyses.

As shown in Table 2 Teacher-SSRS Social Skills means were in the average range for all groups at pre- and post-intervention. Results of the repeated measures ANOVA revealed no significant main effects or interactions at the .01 level for Teacher-SSRS Social Skills. There was not a significant main effect for time $F(1,53) = 6.48, p > .01$, treatment $F(1,53) = .28, p > .01$, or grade $F(1,53) = .02, p > .01$. Results indicated no significant effects for the following interactions: time by treatment $F(1,53) = .65, p > .01$, time by grade $F(1,53) = .67, p > .05$, or time by treatment by grade $F(1,53) = 1.07, p > .01$. Effect sizes for the interactions, as indexed by partial eta squared, were small at .012, .013, and .02, respectively. Results indicate that intervention and comparison students did not differ in pre-post effects on Teacher SSRS Social Skills scores. Moreover, students in different grade levels were not differentially impacted by time or intervention.

Teacher-Reported Problem Behaviors

Teacher-SSRS Problem Behaviors scores were also subjected to a three-way mixed ANOVA with two treatment conditions (intervention and comparison), two grade levels (first and fourth) and two times (pre- and post-intervention). Preliminary checks were conducted to test the Teacher-SSRS Problem Behaviors data for violations of normality, homogeneity of variance, and homogeneity of intercorrelations. The Kolmogorov-Smirnov goodness of fit test revealed that problem behavior scores for fourth-graders in the treatment group violated the assumption of normality at Time 1 $D(15) = .23, p < .05$, and at Time 2 $D(15) = .34, p < .05$. Additionally, Levene's test of equality of error variances was significant at Time 1 $F(3,53) = 3.10, p < .05$, and at Time

2 $F(3,53) = 9.82, p < .05$, indicating that the variance in teacher-reported Problem Behavior scores was unequal across groups. Box's test of equality of covariance matrices was also significant $F(9, 27,002) = 3.40, p < .05$, indicating that correlations between Time 1 and Time 2 scores were not equal across groups. To address these violations a more stringent alpha level (.01) was used.

As shown in Table 3 Teacher-SSRS Problem Behavior means were in the average range for all groups at pre- and post-intervention. Results indicated no significant main effects for time $F(1,53) = 1.66, p > .01$, treatment $F(1,53) = 1.12, p > .01$, or grade $F(1,53) = .26, p > .01$. There were no significant effects for the following interactions: time by treatment $F(1,53) = .85, p > .01$, time by grade $F(1,53) = 1.13, p > .01$, or time by treatment by grade $F(1,53) = .68, p > .01$. Effect sizes for the interactions, as indexed by partial eta squared, were small at .016, .021, and .003 respectively. Results indicate that intervention and comparison students did not differ in pre-post effects on Problem Behaviors, nor were first- and fourth-graders' SSRS Problem Behaviors scores differentially impacted by time or intervention.

Fourth Grade Self-Reported Social Skills

The fourth-graders' SSRS self-reported Social Skills scores were subjected to a mixed two-way ANOVA with two levels of a treatment (comparison and treatment) and two times (pre- and post-intervention). Self-reported SSRS social skills standard score means and standard deviations are reported in Table 5. Preliminary checks were conducted to test the assumptions of normality, homogeneity of variance, and homogeneity of intercorrelations; all three assumptions held. There was not a significant main effect for time $F(1,28)=2.49, p>.01$. The time by treatment interaction was also not

significant: $F(1,28)=1.15$, $p>.01$. The interaction effect size, as indexed by partial eta squared was .039, which is small. These results indicate that intervention and comparison students did not differ in pre-post effects on self-reported social skills.

Self-Reported Empathy

Intervention and grade level effects on BIE scores were investigated using an ANCOVA with Time 1 BIE scores entered as the covariate. Preliminary checks were first conducted on the following assumptions: normality, linearity, homogeneity of variances, and homogeneity of regression slopes. Kolmogorov-Smirnov tests revealed that Time 2 scores in the treatment group violated the assumption of normality $D(15) = .28$, $p < .05$. The homogeneity of variance assumption held. Checks of linearity revealed a strong relationship between Time 1 and Time 2 BIE scores for the fourth-grade treatment group (r squared = .88) and a moderate relationship between Time 1 and Time 2 BIE scores for the fourth grade comparison group (r squared = .5). The relationship between Time 1 and 2 scores was weaker for the first grade treatment (r squared = .3) and comparison groups (r squared = .24) perhaps because self-report measures are less reliable with younger children.

Relevant means and standard deviations are presented in Table 4. Pre- and post-intervention mean BIE scores for first- and fourth-graders were within one standard deviation of the mean scores reported by Bryant (1982). ANCOVA results revealed that the covariate, Time 1 BIE scores, was significantly related to Time 2 scores $F(1,52) = 66.38$, $p < .01$ (partial eta squared = .56) which is important for reducing error and variance and gaining sufficient power to compensate for the degree of freedom used up by the covariate (Harlow, 2005). Although the means show slight changes in the expected

direction for the intervention group and slight declines for the comparison groups, there were no significant effects for treatment $F(1,52) = 2.22, p > .01$, or grade $F(1,52) = .10, p > .01$. The treatment by grade interaction was also not significant $F(1,52) = 2.54, p > .01$. Results indicate that after controlling for pre-intervention treatment group differences, there were no significant group differences on Time 2 BIE scores.

Social-Emotional Teaching Strategies

Overall, intervention teachers reported greater pre-post gains than comparison teachers in self-reported frequency of using social-emotional teaching strategies. Additionally, at Time 1 and Time 2, both first grade teachers reported using social-emotional teaching strategies more frequently than fourth grade teachers, and they reported using a wider range of strategies.

At Time 1 both fourth grade teachers reported using social-emotional teaching strategies eight or more times per week, as measured by their responses on the *Second Step Social-Emotional Learning Checklist* (Appendix N). The fourth grade comparison teacher reported using seven of the strategies on the checklist, and the fourth grade intervention teacher reported using six.

Following four weeks of intervention, the fourth grade intervention teacher reported using social-emotional teaching strategies at least 12 times in the previous week, an increase of four over her pre-intervention ratings. She reported increases from once per week to 2-3 times per week in discussing perspective-taking with students and in intervening in student conflicts by asking students to report how the other party felt. She also reported using eight of the nine strategies on the checklist, an increase of two over pre-intervention ratings. Two strategies that she reported using mid-intervention that she

did not endorse pre-intervention were: “think aloud strategies” to model social-emotional skills, and intervening in student conflicts by prompting them to use social problem-solving strategies. Following completion of the intervention, she reported using social-emotional teaching strategies at least 12 times per week, consistent with her mid-intervention ratings. She reported using seven of the nine strategies on the checklist, one less than at mid-intervention, and one more than at pre-intervention. At post-intervention, the fourth grade comparison teacher reported using social-emotional teaching strategies at least eight times per week, consistent with pre-intervention ratings, although the number of self-reported strategies endorsed declined from seven to five.

At Time 1 the first grade intervention teacher reported using social-emotional teaching strategies 19 or more times per week, and the first grade comparison teacher reported using them 20 or more times per week. Both first grade teachers reported using all nine social-emotional teaching strategies on the checklist.

After four weeks of intervention, the first grade intervention teacher’s ratings were identical to her pre-intervention ratings. She reported using all nine strategies with the same frequency as at pre-intervention, for a total of at least 19 uses in the previous week. Following completion of the intervention, she still reported using all nine strategies, but total reported frequency of use increased to at least 24 times in the previous week. She reported increases in frequency of discussing perspective-taking, discussing upcoming opportunities when students might use social problem solving skills on their own, and modeling “thinking out loud” strategies. The first grade comparison teacher reported using social-emotional teaching strategies 21 or more times per week, an

increase of one over pre-intervention, and she reported using all nine strategies, consistent with pre-intervention ratings.

Teacher Perceptions of Program Effects and Procedures

Question 1: Did you notice any changes in student behavior over the course of our intervention? Did you ever observe students making connections to Second Step principles outside of Second Step lesson time?

Both intervention teachers reported observing positive changes in student behavior over the course of the intervention. The fourth grade teacher reported that students “took more time” when responding to peer provocations and conflicts and that they were “less likely to yell and snap and get in each other’s faces.” She noted that she observed some students using *Second Step* emotion vocabulary when describing characters in an assigned novel. She also indicated that she observed students practicing their *Second Step* (or similar) role plays at recess.

The first grade teacher reported that students appeared more interested in facial expressions during the course of the intervention. She said that they were more likely to comment on peer and teacher facial expressions and that she observed some of them playing a variation on one of the facial expression games during free time. However, she also reported that she remained concerned about classroom cliques.

Question 2: In the past few weeks have you noticed any additional changes in student behavior? Have you observed students making connections to program principles?

The fourth grade teacher commented that she had not noticed any recent changes, different from those previously described, but that the students were still taking more time to respond to each other in conflict situations. “They’ve really slowed down,” she

said, “I can tell that some of them are being more patient when someone’s bothering them. They just yell less.”

The first grade teacher commented that she observed children relating to the feelings of storybook characters and volunteering to share their feelings more frequently than they did prior to the program. “Sometimes I’ll be reading a story and before I even ask a question, someone will raise their hand and say, ‘One time *I* felt surprised’ so I think they are tuning in to feelings more and talking about them more. I don’t think they did that as much before.”

Question 3: Are you doing anything differently in your classroom since beginning this program?

The fourth grade teacher reported that she was reading a novel, recommended by the program, aloud to her students, and reported that they related to the main character. “They groan, they laugh, they get what she’s feeling,” she said, “and we talk about it.”

The first grade teacher reported that she had not yet initiated any changes, but that she responded to changes that she perceived in the children’s attention to feelings and facial expressions. “I’m not really doing anything different,” she said, “but if the kids are talking about my surprised face or the feelings in the story, then I’ll have that conversation or maybe exaggerate my expression even more so everyone can see. So I might be doing those things more, because they’re doing them more.”

Question 4: Are there any elements of the program that you think you will continue to use in your classroom?

The fourth grade teacher reported that she planned to incorporate more role play into classroom activities. “The role plays really got them excited and kept their attention

and anything that keeps their attention is a keeper,” she said.

The first grade teacher reported that she was thinking about using some *Second Step*-style lessons to highlight what it feels like to be left out and the importance of being inclusive. “I want to try some lessons like these to try to open up my cliques. They need to look around and notice who’s left out. They need to try to play with different people. We could have fun practicing that too.”

Question 5: What recommendations would you make for future implementations of this program? Is there anything that could be changed that might improve the program?

The first grade teacher indicated that the program might be better suited to a small group format. She noted that sometimes every child wanted to respond to a discussion question or take a turn at an activity, which was not always possible, and that some children wanted to tell long stories which are not always a good fit for large group discussions. However, she noted that the challenges of engaging young children in large group discussions or activities are “... a general problem across the curriculum. They all want turns, they all want attention, and they’re not really aware of each other in discussions. Sometimes they repeat what another kid just said. That happens a lot with first-graders.”

The fourth grade teacher reported that she would like for parents to see the lessons. “We send home letters all the time, there’s so much mail, but you really have to see something like this to get what we’re actually doing, that it’s not just talking about friendship and respect.” She added that if parents had the opportunity to observe lessons, they might not feel upset when a teacher reported a social concern about their child. She said, “I would want them to see that these are just things we work on with all kids.”

Additional Exploratory Analyses

Within-grade analyses were conducted to further explore possible patterns in the data. An examination of change scores revealed that 47% of first grade intervention students showed a positive pre-post change (i.e., an increase of one or more standard score points) on Teacher-SSRS Social Skills scores, compared to 8% of first grade comparison students. Likewise, 27% of intervention fourth-graders showed a positive pre-post change compared to 20% of comparison students. To follow up on these observations, two separate within-grade repeated measures ANOVAs were conducted to explore the effects of time and intervention on Teacher-SSRS Social Skills scores. At the .05 level, there was a statistically significant time by treatment interaction for first-graders [$F(1,25)=6.03$, $p=.02$]. Results indicate that the comparison group's post-intervention mean score ($M=93.17$, $SD=11.11$) was significantly lower than its pre-intervention mean score ($M=97.33$, $SD=10.37$), while the intervention group's pre- ($M=94.27$, $SD=6.52$) and post-intervention scores ($M=94.40$, $SD=8.53$) did not differ. The effect size, as measured by partial eta squared, was small (.19). There was no statistically significant time effect [$F(1,28)=3.63$, $p>.05$] or time by treatment interaction at the fourth grade level [$F(1,28)=.02$, $p>.05$].

Discussion

Concerns about bullying and antisocial behaviors, coupled with a renewed interest in school-based primary prevention, have prompted many schools to implement social-emotional skills training programs. Given these programs' important goals, there is an ongoing need for evaluation studies. Although there is growing empirical support for *Second Step* and other contemporary social-emotional skills training programs, most existing research investigates program effects following completion of an entire program. Less is known about specific unit effects. Empathy training is one common component of social-emotional skills training programs rarely studied in isolation. Moreover, relatively few evaluations include specific empathy measures with known psychometric properties, and existing studies often lack comparison groups, limiting researchers' capacity to draw causal conclusions.

This study was a single-school quasi-experimental pre-post comparison group investigation of *Second Step* empathy training unit effects on first- and fourth-graders' teacher-reported social skills, teacher-reported problem behaviors, self-reported empathy, and on fourth-graders' self-reported social skills. Additionally, the study explored intervention teachers' self-reported use of social-emotional teaching strategies, as well as teacher perceptions of program effects and procedures. The following section will discuss findings, possible explanations for absence of significant quantitative effects, strengths, limitations, and implications for research and practice.

Student Quantitative Effects

Results of the planned quantitative analyses suggest that intervention and comparison students did not differ significantly in pre-post effects on teacher-reported social skills, teacher-reported problem behaviors, self-reported empathy, or self-reported use of social skills. Additionally, results suggest that first- and fourth-graders were not differentially impacted by time or intervention, as measured by the Teacher-SSRS and the BIE. However, additional exploratory within-grade analyses of Teacher-SSRS social skills scores provide some evidence that first grade intervention students may have maintained their pre-intervention levels of social skills, while comparison students may have declined. This interaction did not emerge in the exploratory analysis of fourth grade scores.

These results must be viewed with caution as relatively small group sizes limit power, the probability of correctly rejecting the null (no effect) hypothesis when there is a true effect. Power can also be described as the probability of avoiding a Type II error, or retention of the null hypothesis when there is actually an effect. Power is affected by sample size, alpha level, and effect size. Means from larger samples provide more accurate estimates than those derived from smaller samples, so group differences calculated from means of larger groups may be more trustworthy than difference values from smaller group comparisons, like the ones used in this study. The alpha, or significance level, refers to the probability of rejecting a true null hypothesis or making a Type I error. The higher (weaker) the alpha level, the greater the probability that observed effects can be explained by chance. Effect size refers to the magnitude of an effect. *Second Step* researchers with significant findings have typically found small to

medium effect sizes, which are more difficult to detect than large effect sizes (e.g., Edwards et al. 2005; Grossman et al., 1997; Taub, 2001). Larger sample sizes are required to ensure sufficient power to detect small or medium-sized effects, than those required to detect large effects.

The interaction effect that emerged in the exploratory analysis of first-graders' Teacher-SSRS social skills scores was significant at the .05 level and had a small effect size. Although these results were not robust enough to be captured in the larger analysis, they provide some evidence that first grade intervention students maintained their pre-intervention levels of Teacher-SSRS social skills, while comparison students declined. The possible decline in first grade comparison student social skills scores is consistent with Grossman et al.'s (1997) finding that comparison students increased problem behaviors over time. Post-intervention scores were collected in May; it's possible that students need additional support to maintain appropriate social skills towards the end of the school year. Additional potential explanations for the absence of findings on the planned quantitative analyses are discussed below.

The lack of significant changes on teacher ratings of behavior is consistent with findings of some other *Second Step* researchers (Edwards et al., 2005; Grossman et al., 1997; McMahon et al., 2000). For example, Grossman et al. (1997) found that *Second Step* intervention and control students did not differ on teacher or parent behavior ratings. However, direct observations revealed that intervention students demonstrated moderate decreases in physical aggression and increases in prosocial behavior, while control students exhibited increases in physical aggression over time (Grossman et al., 1997). Similarly, McMahon and colleagues' (2000) direct observation data revealed significant

decreases in problem behaviors among preschool and kindergarten *Second Step* participants, although there were no significant changes in Teacher-SSRS Social Skills scores, and mixed results for Problem Behavior scores. Grossman et al. (1997) noted that direct observations are likely to be more sensitive than teacher ratings to subtle changes in behavior and to changes exhibited outside of close teacher supervision. The lack of direct observation procedures in the current study may have limited the researcher's capacity to capture potential subtle changes in behavior.

In addition, laboratory measures provide explicit opportunities to collect data on children's responses to simulated or described distress or need. Teachers' rating scale responses are likely informed by general impressions, as they may not have had a recent opportunity to observe a student in a situation that calls for empathic responding. The inclusion of laboratory measures, or perhaps a classroom-based role play observation measure, may enhance potential for collecting data on the particular types of emotional and behavioral responses, and situational contexts, most relevant to an empathy training evaluation study. Although rating scales have limits, it is important to note that some *Second Step* studies have found changes on teacher ratings of intervention students' social skills (e.g., Frey et al., 2005; Taub, 2001). The relative usefulness of teacher rating scales and alternatives, such as direct observations in naturalistic and in vitro settings, as measures of empathy training program effects is an important topic for future study.

It is also important to recognize that the current study was relatively unique in examining the impact of one *Second Step* unit, as opposed to measuring effects following program completion. Perhaps the empathy training unit is more likely to produce measurable teacher-report effects when followed by the impulse control and anger

management units than when delivered alone. Whereas the empathy training unit focuses primarily on recognizing one's own and others' feelings and intentions, subsequent units include additional discussion, modeling, and practice of active strategies for responding to feelings and social situations. Possible changes in the affective and cognitive processes targeted by the empathy-training unit may be difficult for teachers to observe. It's also possible that the empathy training unit is not as powerful a contributor to overall program effects on social skills as other units in the program.

Another possible explanation for the absence of change in teacher and self-report ratings is that mean pre-intervention SSRS and BIE scores were in the average range for the current sample. Many previous *Second Step* studies were set in public schools where a high proportion of participants came from low-income backgrounds (e.g., McMahon et al., 2000; McMahon & Washburn, 2003; Taub et al., 2001). On average, participants in these prior studies likely experienced more risks to social development -- and therefore more potential to benefit from a preventive program -- than students in the current sample, which was drawn from a suburban private Catholic school.

Prior research on violence prevention interventions has revealed that the magnitude of intervention effects is affected by pre-intervention levels of child, family, and/or classroom aggression or bullying, with moderate to high levels of pre-intervention aggression predicting a greater effect than low levels of aggression (Frey et al., 2005, Ialongo, Werthamer, Kellam, Brown, Wang, & Lin, 1999; Kellam, Ling, Merisca, Brown, & Ialongo 1998; Losel & Beelmann, 2006). Additionally, in a meta-analysis of social skills intervention research for anti-social youth, Ang & Hughes (2001) found that referred youth demonstrated larger effects from social skills training when group

composition included typically developing children, as opposed to deviant-only peers. Although their research focused on targeted interventions, it is relevant in that it highlights the impact of contextual variables on social skills training effects. It's possible that, in the current study, pre-existing school climate variables and social-emotional instruction that the students were exposed to through their religious training strengthened or buffered participants' social development to a point that the effects of an additional empathy program could not be easily detected.

Social-Emotional Teaching Strategies

Although not a primary study objective, one interesting finding was the increase in intervention teachers' self-reported use of social-emotional teaching strategies (see Figures 1 and 2). The fourth grade intervention teacher reported using social-emotional teaching strategies at least eight times per week pre-intervention; she reported a frequency of at least 12 times per week mid-intervention and during the final week of intervention. The first grade intervention teacher reported using social-emotional teaching strategies at least 19 times per week pre-intervention and mid-intervention; she reported a frequency of at least 24 times per week during the final week of intervention. The comparison teachers post-intervention ratings were consistent with their pre-intervention ratings.

These results must be viewed with caution because the psychometric properties of the measure are unknown, and self-report frequency estimates may be subject to error and response biases. Moreover, the frequency of conflicts warranting teacher intervention was not measured. Further, observational data were not collected to supplement teacher self-report data.

It is noteworthy, however, that the specific increases reported by the intervention teachers overlap with *Second Step* empathy training content and with general program themes, but not with strategies specific to other units. For example, the fourth grade intervention teacher reported increases in the frequency of the following three strategies: discussing perspective-taking, intervening in student conflicts by asking students to report how the other party felt, and modeling “thinking out loud” strategies. The first two strategies are closely tied to the content of the empathy training unit, and the third is a self-talk modeling strategy used in lessons across all three units. She did not report increases in teaching strategies specific to other *Second Step* units (e.g., intervening in student conflicts by prompting them to use anger-management strategies). Similarly, the first grade intervention teacher reported increases in frequency of discussing perspective-taking, discussing upcoming opportunities when students might use social problem solving skills on their own, and modeling “thinking out loud” strategies. She did not report increases in the use of strategies that were specific to another *Second Step* unit. These results point to the need for additional research on program effects on teaching strategies.

Teacher Perceptions of Program Effects and Procedures

During post-intervention interviews with the researcher, both intervention teachers reported observing positive changes in student behavior. The fourth grade teacher reported that students were taking more time and showing more patience when responding to provocations or peer conflicts. She indicated that they were less likely to yell at one another in conflict situations. The first grade teacher reported that her students showed increased attention to peer, teacher, and story book characters’ facial expressions

and feelings. Additionally, both teachers reported observing students engaging in *Second Step* games or role plays (or variations on them) during their free time, suggesting that these program components were preferred activities for the children, which supports treatment acceptability. Moreover, the teachers' reported observations of children engaging in these activities outside of *Second Step* lesson time provide evidence of generalization effects.

What accounts for inconsistencies between interview responses and the Teacher-SSRS data? First, it is important to acknowledge that participants experience different demand characteristics during a face-to-face interview with the researcher than when completing paper-and-pencil measures on their own.

However, the interview also provided teachers with an opportunity to comment on behaviors not tapped by the rating scales. The first grade teacher's reported observation that students showed increased attention to feelings and facial expressions does not correspond directly to any SSRS items. Moreover, the interview format may have allowed teachers to describe changes that were too subtle to be captured within the three-point (*never, sometimes, very often*) response range of the SSRS. For example, the fourth grade teacher commented that her students "yell less" in conflict situations. It's possible that some students showed a reduction in yelling at peers, although the frequency of relevant skills and behaviors assessed on the SSRS (e.g., controls temper in conflict situations, argues with others) was still best described in the *sometimes* range at both pre- and post-intervention. Further, observed changes in individual students may be salient to teachers, although the changes might be obscured in the aggregate data.

Teacher suggestions for improvement included a smaller group format and greater parental involvement, including opportunities for parents to observe lessons. The suggestion to invite parents to observe raises a valuable point about the importance of incorporating generalization programming into social skills training curricula (DuPaul & Eckert, 1994).

Importantly, both teachers expressed plans to continue using *Second Step* components, such as role-play and *Second Step*-style lessons, to address social-emotional concerns in their classrooms, suggesting approval for program goals and procedures.

Strengths and Limitations

This study was unique in its examination of the empathy training unit alone. Most *Second Step* research investigates the impact of the entire curriculum, following completion of all units. Additionally, the study was unique in its inclusion of a specific empathy measure, the BIE. Although *Second Step* and other social skills curricula include an empathy training unit, few existing outcome studies have attempted to measure empathy-training program effects on participants' empathy.

An additional strength was use of a pre-post comparison group design. This design addresses threats to internal validity such as maturation and repeated testing effects (Campbell & Stanley, 1963). Although random assignment to groups is optimal for internal validity, the quasi-experimental use of intact groups enabled the current study to proceed with minimal disruption to school routines. Moreover, use of multi-informant measures, as well as two different grade-levels, provided the opportunity to study multiple perspectives and age-groups.

The single-school design was both a strength and limitation. Although a single-school setting risks indirectly exposing comparison students to the intervention through playground, cafeteria, and other interactions with intervention students and teachers, it also reduces contextual confounds that arise in separate school studies, such as differences in school climate, discipline policies, and neighborhood characteristics.

One limitation was the relatively small student sample ($n=57$) and group sizes, which limited power. Additional research with larger samples is needed to ensure sufficient power to detect potential effects. Additionally, given the small sample and its relative ethnic homogeneity, an investigation of potential differences on specific populations of students was not possible. Moreover, although the program was designed for whole-class and school-wide implementation, the current implementation included two grade levels and 60% of the potential sample, as parent permission was not obtained for all students. Effects may be more pronounced with class- and school-wide implementation.

An additional previously discussed limitation was the absence of direct observation measures, which in some studies have revealed changes in student behavior not captured by indirect paper-and-pencil measures (Grossman et al., 1997, McMahon et al., 2000).

Another limitation is the absence of longer term follow up. All post-intervention measures were completed within three weeks of intervention, preventing exploration of enduring or late-emerging effects. Moreover, as Frey et al. (2005) point out, recommended implementation involves multi-year program participation. Children and teachers experiencing the program for the first time may show different effects than those

who participated in prior years. *Second Step* is a prevention program, and therefore aims not only to boost or protect current functioning, but also to inoculate participants, preparing them to avoid or cope well with future risks and challenges. Since one aim of prevention programs is to help children avoid future problems or cope well with potential future risks, a comprehensive evaluation will include a longitudinal analysis.

One final limitation is the limited information available on the extent to which *Second Step* empathy training skills and concepts were reinforced outside of intervention time. Although the *Second Step* social-emotional learning checklists provided one measure of teachers' use of social-emotional teaching strategies in their classrooms, no other data on generalization efforts or effects were collected.

Implications for Future Research and Practice

Additional research with larger samples is needed to investigate potential explanations for and questions raised by findings in this study. The implementation of universal social-emotional skills training programs such as *Second Step* is widespread and not limited to schools serving students experiencing high levels of risk. One important direction for future exploration is potential differences in *Second Step* and other program effects on students and communities with differing levels of pre-intervention risk factors. Further, existing diversity of implementation settings raises questions about how program goals and evaluation methods should differ to best suit the varying needs of different schools and communities.

Additionally, the study raises questions for research and practice about the implications of implementing specific units or combinations of units as opposed to a curriculum in its entirety. Does one of the three units, (empathy training, impulse control,

or anger management), or a particular combination of units or lessons contribute more to program effects on social skills than others, or do outcomes depend on a match between student needs and program components? Since the reality is that many programs are pared down during classroom-based implementations (e.g., to accommodate tight schedules, teacher and child interests, and/or perceived needs), additional research on program component and sequencing effects could be useful in informing implementation decisions about selection of particular units or lessons.

Investigation of potential program effects on teaching strategies is another important direction for future research. Alternately, studies could compare the effects of *Second Step* in classrooms where teachers display varying degrees of social-emotional instruction and positive behavior support outside of *Second Step* lesson time. This research could shed light on contextual variables that may impact program outcomes. There is also a need to learn more about how to promote school professionals' tendencies to recognize and respond empathically and constructively to the needs of students and families. What would an empathy training program for school professionals look like?

Further, given recent growth in school districts' adoption of Response to Intervention models, in which decisions about the need for more intensive interventions are based on student response to universal or less intensive interventions, there is a need for studies that track sub-sets of individual *Second Step* participants using frequent measures, such as classroom observations and brief teacher and parent ratings. Such studies might establish methodological guidelines for frequent progress monitoring approaches, and also reveal differential effects on individuals or specific populations that may be obscured in aggregate data. Future research should also evaluate the effects of

Second Step combined with differing levels and types of individual and class-wide contextual interventions.

Additionally, longitudinal studies would enable investigation of longer term, late-emerging, and/or cumulative effects of multi-year *Second Step* program participation, important areas to address, given the preventive goals of the program (Frey et al., 2005). Finally, to ensure that researchers have opportunities to collect data on the precise types of emotional and behavioral responses, and setting events, that *Second Step* targets, there is a need to incorporate a diverse range of measures in future evaluation studies, including direct observations in naturalistic and simulated situations. Ratings based on observations of students' *Second Step* role plays, or their responses to ambiguous *Second Step* stimulus pictures, might provide an alternative measure of student skills and learning; future research is required to explore such approaches.

As schools continue to seek and implement empirically supported social-emotional skills training programs, ongoing research is needed to investigate program effects and improve understanding of factors that influence outcomes. Although this study did not find significant intervention effects on quantitative measures of student social skills, problem behaviors, or empathy, teacher self-report and interview data were more encouraging. Intervention teachers reported increases in their use of social-emotional teaching strategies; no such changes were reported by comparison teachers, raising the possibility that *Second Step* exposure may have affected the frequency with which teachers use social-emotional teaching strategies in their classrooms. Additionally, teachers reported reductions in student yelling and increased student attention to facial expressions and feelings. They also expressed approval for program goals and

procedures, which is important since teacher endorsement of an intervention's acceptability bodes well for implementation. Future research should further explore these results and related questions, taking care to employ psychometrically sound measures with optimal potential to capture the types of effects that teachers reported. Finally, an improved understanding of school-based empathy training requires a deeper understanding of the varied intrapersonal and contextual factors that enable us to recognize and respond appropriately to others' needs and feelings.

Table 1

Number and Gender of Students by Group

Grade	Condition	Boys	Girls	Total
First	Intervention	7	8	15
First	Comparison	5	7	12
Fourth	Intervention	7	8	15
Fourth	Comparison	7	8	15
Total		26	31	57

Table 2

Means and Standard Deviations of Teacher-rated SSRS Social Skills Scores

First Grade			
Condition	Time 1	Time 2	Sample Size
Intervention	94.27 (6.52)	94.40 (8.53)	15
Comparison	97.33 (10.37)	93.17 (11.11)	12
Total	95.63 (8.67)	93.85 (9.58)	27
Fourth Grade			
Condition	Time 1	Time 2	Sample Size
Intervention	99.67 (19.20)	95.47 (17.53)	15
Comparison	94.73 (17.09)	91.07 (14.07)	15
Total	97.20 (18.03)	93.27 (15.78)	30

Table 3

Means and Standard Deviations of Teacher-SSRS Problem Behavior Scores

First Grade			
Condition	Time 1	Time 2	Sample Size
Intervention	99.33 (11.97)	101.53 (12.03)	15
Comparison	103.92 (9.90)	107.33 (7.60)	12
Total	101.37 (11.14)	104.11 (10.53)	27
Fourth Grade			
Condition	Time 1	Time 2	Sample Size
Intervention	100.87 (17.92)	99.53 (17.74)	15
Comparison	101.40 (15.39)	103.27 (12.87)	15
Total	101.13 (16.42)	101.40 (15.35)	30

Table 4

Means and Standard Deviations of Self-Reported BIE Scores

First			
Grade	Time 1	Time 2	Sample Size
Intervention	14.13 (2.56)	15.27 (3.11)	15
Comparison	15.42 (2.84)	14.33 (3.92)	12
Total	14.70 (2.72)	14.85 (3.45)	27
Fourth			
Grade	Time 1	Time 2	Sample Size
Intervention	13.67 (4.47)	13.86 (4.85)	15
Comparison	16.27 (1.87)	15.93 (2.43)	15
Total	14.97 (3.62)	14.77 (3.95)	30

Table 5

Means and Standard Deviations of Fourth-Graders' Self-Reported SSRS Scores

Condition	Time 1	Time 2	Sample Size
Intervention	107.40 (13.55)	108.33 (15.04)	15
Comparison	107.13 (9.99)	112.00 (11.48)	15
Total	107.27 (11.69)	110.17 (13.26)	30

Table 6

Intercorrelations between Pre-Intervention BIE and Teacher-SSRS Scores

Variable	BIE	Soc. Skills	Problem Behavior	Coop	Assert	Self Con	Extern	Intern	Hyp
Children (n=57)									
BIE	--								
Soc. Skills	-.122	--							
Problem Behavior	.028	-.789**	--						
Coop	-.115	.735**	-.623**	--					
Assert	-.105	.736**	-.438**	.398**	--				
Self Con	.039	.828**	-.799**	.470**	.458**	--			
Extern	-.002	-.692**	.887**	-.478**	-.320*	-.827**	--		
Intern	.021	-.425**	.562**	-.201	-.464**	-.362**	.266*	--	
Hyp	-.025	-.670**	.808**	-.794**	-.338*	-.594**	.699**	.213	--

** Correlation is significant at the 0.01 level 2-tailed.

* Correlation is significant at the 0.05 level 2-tailed.

Table 7

Intercorrelations between Post-Intervention BIE and Teacher-SSRS scores

Variable	BIE	Soc. Skills	Problem Behavior	Coop	Assert	Self Con	Extern	Intern	Hyp
Children (n=57)									
BIE	--								
Soc. Skills	.110	--							
Problem Behaviors	-.084	-.712**	--						
Coop	.122	.791**	-.658**	--					
Assert	.124	.812**	-.447**	.511**	--				
Self Con	.197	.842**	-.712**	.608**	.588**	--			
External	-.182	-.552**	.856**	-.449**	-.257	-.717**	--		
Internal	.079	-.475**	.601**	-.334*	-.578**	-.386**	.365**	--	
Hyp	-.199	-.580**	.799**	-.747**	-.279*	-.589**	.623**	.205	--

** Correlation is significant at the 0.01 level 2-tailed.

* Correlation is significant at the 0.05 level 2-tailed.

Table 8

Intercorrelations between Pre-Intervention BIE and Self-SSRS Scores

Variable	BIE	Empathy	Coop	Assert	Self Con	Soc Skills
Fourth Graders (n=30)						
BIE	--					
Empathy	.806**	--				
Coop	.469**	.614**	--			
Assert	.365*	.414*	.249	--		
Self Con	.287	.448*	.448*	.615**	--	
Soc Skills	.458*	.687**	.702**	.705**	.835**	--

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 9

Intercorrelations between Post-Intervention BIE and Self-SSRS Scores

Variable	BIE	Empathy	Coop	Assert	Self Con	Soc Skills
Fourth Graders (n=30)						
BIE	--					
Empathy	.819**	--				
Coop	.535**	.788**	--			
Assert	.580**	.585**	.665**	--		
Self Con	.452*	.507**	.598**	.521**	--	
Soc Skills	.630**	.802**	.902**	.780**	.789**	--

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 10

Correlations between Fourth Grade Pre-Intervention Teacher and Student Ratings

Measure	BIE	S-SSRS Empathy	S-SSRS Coop	S-SSRS Assert	S-SSRS Self Con	S-SSRS Soc Skills
Fourth Graders (n=30)						
T-SSRS Soc Skills	-.112	.026	.319	.058	.190	.203
T-SSRS Prob Behaviors	-.010	-.207	-.348	-.049	-.289	-.266
T-SSRS Coop	.007	.172	.346	.098	.215	.247
T-SSRS Assert	-.127	-.053	.265	.014	-.018	.018
T-SSRS Self Con	.017	.098	.230	.080	.309	.226
T-SSRS External	.027	-.157	-.232	-.037	-.279	-.214
T-SSRS Internal	.037	-.090	-.214	-.051	-.161	-.104
T-SSRS Hyp	-.180	-.310	-.395*	-.100	-.226	-.256

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Table 11

Correlations Between Fourth Grade Post-Intervention Teacher and Student Ratings

Measure	BIE	S-SSRS Empathy	S-SSRS Coop	S-SSRS Assert	S-SSRS Self Con	S-SSRS Soc Skills
Fourth Graders (n=30)						
T-SSRS Soc. Skills	.167	.506**	.417*	.166	.149	.365*
T-SSRS Prob Behaviors	-.194	-.350	-.249	-.115	-.081	-.228
T-SSRS Coop	.243	.560**	.427*	.135	.167	.365*
T-SSRS Assert	.101	.429*	.344	.180	.065	.267
T-SSRS Self Con	.344	.573**	.498**	.230	.287	.434*
T-SSRS External	-.277	-.372*	-.280	-.129	-.192	-.268
T-SSRS Internal	-.042	-.183	-.125	-.027	.119	-.038
T-SSRS Hyp	-.347	-.558**	-.433*	-.275	-.217	-.386*

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Figure 1. Intervention teachers' self-reported use of social-emotional teaching strategies.

Figure 2. Comparison teachers' self-reported use of social-emotional teaching strategies.

Appendices

Appendix A

FIRST GRADE PARENT PERMISSION FORM FOR RESEARCH

The University of Rhode Island
Department of: School Psychology
Address: 416 Chafee Building
Kingston, RI 02881

Title of Project: Evaluation of the *Second Step* Empathy Training Unit

Dear Parent(s) / Legal Guardian(s):

My name is Kim Sherman and I am a school psychology doctoral student at the University of Rhode Island. I am requesting permission for your child to participate in the research project described below. If you have any questions about this study, you should feel free to call me at 401-874-9395 and I will be happy to talk with you.

Description of the project:

The purpose of this study is to learn about the effects of an elementary school social skills curriculum unit on children's feelings and social skills.

What will be done:

If you and your child decide that he/she will take part in this study here is what will happen:

Your child will complete one questionnaire in his/her classroom about his/her feelings. The researcher will read a statement to your child such as, "Some songs make me feel happy," and your child will respond by putting a card into an envelope marked "Me" or "Not me." These questionnaires will be completed twice over the course of approximately eight weeks. Completing the questionnaires will take an estimated 15 minutes. Your child's teacher will also complete one questionnaire about your child's social behaviors.

The first unit from a social skills curriculum called the *Second Step* will also be taught in your child's classroom by the researcher with support from your child's teacher. Your child's classroom will either receive the curriculum early in the spring semester or later in the year. Each lesson will be taught once a week for eight weeks. Each weekly lesson will last approximately 30 minutes and the lessons will be offered during the time when your child usually has religion and ethics class. This adds up to approximately four hours total lesson time over the course of eight weeks.

The lessons will focus on understanding feelings and showing concern for others. During these lessons, your child will listen to brief stories about feelings and social situations. Children will also look at photos of social or emotional situations, such as a picture of a child who is afraid during a thunderstorm. Children will discuss and role play healthy ways to express feelings and show concern for others' feelings.

Risks or discomfort:

It is unlikely that children will experience any risk or discomfort in this study, although it is possible that discussing feelings and peer relations may remind some children of times when they felt mad, sad, afraid, or upset. If your child becomes upset at any point, your child's teacher will talk with and reassure him/her and the teacher will follow up with you to explain what happened.

Benefits of this study:

Although direct benefits to the children cannot be guaranteed, the researcher will learn more about the effectiveness of social skills programs for children.

Your child and your child's teacher will also have access to new curriculum materials. Your child may enjoy the *Second Step* lessons. He/she may like the stories, photo cards, role play activities, and discussions. He/she may also improve skills that help him/her understand and get along with others.

Confidentiality:

Your child's part in this study is confidential. In the written study, data will only be reported for the class as a whole. No one but the researcher will see individual children's or teachers' questionnaire responses. The report will not include child, teacher, or school names.

The researcher will store all questionnaires in a locked office on the URI campus. Computer files will be password protected on a secure computer and will include numbers in place of names.

Decision to quit at any time:

The decision to take part in this study is up to you and your child. Your child does not have to participate and he/she will have an opportunity to make a choice about whether or not to participate. If you and your child decide that he/she will participate, you may take your child out of the study at any time and your child may decide to quit at any time. If your child does not participate, his/her teacher will provide an appropriate alternative educational activity for your child. Whatever you and your child decide will in no way affect your child's grades or his/her or your relationship with the teacher or school. If you would like to take your child out of the study, simply inform Kim Sherman (401-874-9395) of your decision.

Rights and Complaints:

If you are not satisfied with the way this study is performed, you may discuss your concerns with me, Kim Sherman, (401-874-9395) or with my supervising professor, Paul Bueno de Mesquita, (401-874-4216), anonymously, if you choose. In addition, you may contact the office of the Vice Provost for Graduate Studies, Research and Outreach, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

Your signature on this form means that you have read the consent form and understand the information and you agree that your child may participate in this study. If you agree that your child may participate, please return the signed form to your child's teacher.

Signature of Parent

Signature of Researcher

Printed Name

Typed/printed name

Date

Date

Please sign both consent forms, keeping one for yourself

Appendix B

FOURTH GRADE PARENT PERMISSION FORM FOR RESEARCH

The University of Rhode Island
Department of: School Psychology
Address: 416 Chafee Building
Kingston, RI 02881

Title of Project: Evaluation of the *Second Step* Empathy Training Unit

Dear Parent(s) / Legal Guardian(s):

My name is Kim Sherman and I am a school psychology doctoral student at the University of Rhode Island. I am requesting permission for your child to participate in the research project described below. If you have any questions about this study, you should feel free to call me at 401-874-9395 and I will be happy to talk with you.

Description of the project:

The purpose of this study is to learn about the effects of an elementary school social skills curriculum unit on children's feelings and social skills.

What will be done:

If you and your child decide that he/she will take part in this study here is what will happen:

Your child will complete two questionnaires in his/her classroom about his/her feelings and social behaviors. These questionnaires will be completed twice over the course of approximately eight weeks. Completing the questionnaires will take an estimated 35 minutes; some children will finish more quickly. Your child's teacher will also complete one questionnaire about your child's social behaviors.

The first unit from a social skills curriculum called the *Second Step* will also be taught in your child's classroom by the researcher with support from your child's teacher. Your child's classroom will either receive the curriculum early in the spring semester or later in the year. Each lesson is 30-45 minutes. Lessons will be taught once a week for seven weeks during the time when your child usually has religion and ethics class. This will amount to a total of four to six hours of instruction over the course of seven weeks.

The lessons will focus on understanding feelings and showing concern for others. During these lessons, your child will listen to brief stories about feelings and social situations. Children will also look at photos of social or emotional situations, such as a picture of a child who is afraid during a thunderstorm. Children will discuss and role play healthy ways to express feelings and show concern for others' feelings.

Risks or discomfort:

It is unlikely that children will experience any risk or discomfort in this study, although it is possible that discussing feelings and peer relations may remind some children of times when they felt mad, sad, afraid, or upset. If your child becomes upset at any point, your child's teacher will talk with and reassure him/her and the teacher will follow up with you to explain what happened.

Benefits of this study:

Although direct benefits to the children cannot be guaranteed, the researcher will learn more about the effectiveness of social skills programs for children.

Additionally, your child and your child's teacher will have access to new curriculum materials. Your child may enjoy participating in the lessons. He/she may like the stories, photo cards, role play activities, and discussions. He/she may also improve skills that help him/her understand and get along with others.

Confidentiality:

Your child's part in this study is confidential. In the written study, data will only be reported for the class as a whole. No one but the researcher will see individual children's or teachers' questionnaire responses. The report will not include child, teacher, or school names.

The researcher will store all questionnaires in a private secure location. Computer files will be password protected and will include numbers in place of names.

Decision to quit at any time:

The decision to take part in this study is up to you and your child. Your child does not have to participate and he/she will have an opportunity to make a choice about whether or not to participate. If you and your child decide that he/she will participate, you may take your child out of the study at any time and your child may decide to quit at any time. If your child does not participate, his/her teacher will provide an appropriate alternative educational activity for your child. Whatever you and your child decide will in no way affect your child's grades or his/her or your relationship with the teacher or school. If you would like to take your child out of the study, you simply inform Kim Sherman (401-874-9395) of your decision.

Rights and Complaints:

If you are not satisfied with the way this study is performed, you may discuss your concerns with me, Kim Sherman, (401-874-9395) or with my supervising professor, Paul Bueno de Mesquita, (401-874-4216), anonymously, if you choose. In addition, you may contact the office of the Vice Provost for Graduate Studies, Research and Outreach, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

Your signature on this form means that you have read the consent form and understand the information and you agree that your child may participate in this study. If you agree that your child may participate, please return the signed form to your child's teacher.

Signature of Parent

Signature of Researcher

Printed Name

Typed/printed name

Date

Date

Please sign both consent forms, keeping one for yourself

Appendix C

Children's Assent Form for First-Graders

My name is Kim Sherman. I am doing a study to try to find out more about the different ways kids your age learn about feelings and getting along with others.

If you agree to be in this study, here is what will happen: I will read you a sentence about a feeling that some children have. You will show how you feel about that sentence by putting a card into an envelope marked "Me" or "Not Me." I will explain the directions again when it's time to start. It will take about 15 minutes to finish this activity. It is not a test and there are no right or wrong answers. I am the only person who will see your answers. Your teacher will also answer some questions about how you get along with others. No one else but me will see your teacher's answers.

Then, your teacher and I will teach a lesson every week for eight weeks. The lessons will be about feelings and getting along with others. We will look at photos of children, talk about how they feel, and act out feelings and stories. Our lesson will take about half an hour. The lesson will happen during the time you usually have religion and ethics class.

When we finish these lessons, you will do the Me / Not Me activity again and your teacher will again answer questions about how you get along with others.

You can ask questions about the study at any time. Also, if you decide you don't want to finish, you can stop whenever you want. Just tell your teacher and she will find another learning activity for you to do.

You should talk this over with your parents before you decide to be in the study or not. I will also ask your parents to give their permission for you to be in this study. But even if your parents say "yes", you can still decide not to do this.

Signing this paper means that you have read this form or had it read to you and that you want to be in the study. If you don't want to be in the study, don't sign the paper. Remember, being in the study is up to you. No one will be mad if you don't sign this paper or even if you change your mind later.

Signature of participant: _____ Date: _____

Signature of Investigator: _____ Date: _____

Appendix D

Children's Assent Form for Fourth-Graders

My name is Kim Sherman. I am doing a study to try to find out more about the different ways kids your age learn about feelings and getting along with others.

If you agree to be in this study, here is what will happen: You will fill out two forms. On these forms you will check off boxes to answer questions about your feelings and how you get along with others. It will take about 35 minutes to finish this activity, but you may finish sooner. It is not a test and there are no right or wrong answers. I am the only person who will see your answers. Your teacher will also complete a question form about how you get along with others. No one else but me will see your teacher's answers.

Then, your teacher and I will teach a lesson every week for seven weeks. The lessons will be about feelings and getting along with others. We will look at photos of children, talk about how they feel, and act out feelings and stories. The lessons will take 30-45 minutes and they will happen at the time when you usually have religion and ethics class.

When we finish these lessons, you and your teacher will complete the question forms again.

You can ask questions about the study at any time. Also, if you decide you don't want to finish, you can stop whenever you want. Just tell your teacher and she will find another learning activity for you to do.

You should talk this over with your parents before you decide to be in the study or not. I will also ask your parents to give their permission for you to be in this study. But even if your parents say "yes", you can still decide not to do this.

Signing this paper means that you have read this form or had it read to you and that you want to be in the study. If you don't want to be in the study, don't sign the paper. Remember, being in the study is up to you. No one will be mad if you don't sign this paper or even if you change your mind later.

Signature of participant: _____ Date: _____

Signature of Investigator: _____ Date: _____

Appendix E

FIRST GRADE TEACHER CONSENT FORM FOR RESEARCH

The University of Rhode Island
Department of: School Psychology
Address: 416 Chafee Building
Kingston, RI 02881

Title of Project: Evaluation of a Social Skills Training Curriculum

Dear Teacher:

My name is Kim Sherman and I am a school psychology doctoral student at the University of Rhode Island. I am requesting permission for your participation in the research study described below. If you have any questions about this study, you should feel free to call me at 401-874-9395 and I will be happy to talk with you.

Description of the project:

The purpose of this study is to learn about the effects of an empathy training curriculum unit on children's feelings and social skills.

What will be done:

If you decide to take part in this study here is what will happen:

You will be given the opportunity to review the curriculum materials and to discuss the program with the researcher at a time that is convenient for you. You will be asked to complete a brief five-item questionnaire to help the researcher understand your feelings about the appropriateness of the curriculum for your classroom.

You will be asked to complete a 48-item multiple-choice rating scale for each of your students to answer questions about each child's social behaviors. You will be asked to complete these rating scales at two time points, approximately nine weeks apart.

You will also be asked to complete a brief nine-item questionnaire about the social skills teaching strategies that you use in your classroom.

I will teach eight weekly *Second Step* lessons with your support to your students. These lessons focus on identifying, understanding, and responding to others' feelings. Most lessons introduce concepts through large photos of children interacting and displaying emotions. The lessons involve discussion, modeling, and role play activities. Each lesson lasts 30-45 minutes and will be offered at a day/time that fits your schedule.

Approximately two weeks following the completion of the unit, you will be asked to participate in a fifteen-minute interview with the researcher. She will ask about your

thoughts on the curriculum, how it may have impacted your students and your classroom, and how it might be improved.

Risks or discomfort:

It is unlikely that you will experience any risk or discomfort in this study, although there is a time commitment. It may take five minutes to complete each rating scale, although you may finish more quickly. It may take up to one hour and forty minutes to complete the rating scales for your whole class.

Benefits of this study:

You will receive a \$20.00 gift certificate to a local store of your choice for completing the first round of rating scales. You will receive a \$25.00 gift certificate to a local store of your choice for completing the second round of rating scales.

Although direct benefits to your students cannot be guaranteed, some of your students may improve their ability to recognize and respond respectfully to others' feelings. Also, the researcher will learn more about the effectiveness of empathy training programs.

Additionally, you may enjoy this curriculum and you may find new ways to help your students develop social and emotional skills. You will have access to the curriculum materials over the course of the study (photo cards, posters, videos, suggested extension activities) and you may find these to be helpful resources in your classroom.

Confidentiality:

Your part in this study is confidential. The written report and any presentations will not include teacher, child, or school names. Names will not be used in any computer files.

The researcher will store all questionnaires and interview notes in a locked office on the URI campus. Computer files will be stored in a secure password protected computer.

Decision to quit at any time:

The decision to take part in this study is up to you. You do not have to participate. If you decide to participate, you may decide to quit at any time. If you would like to stop participating, just inform Kim Sherman (401-874-9395) of your decision.

Rights and Complaints:

If you are not satisfied with the way this study is performed, you may discuss your concerns with me, Kim Sherman, (401-874-9395) or with my supervising professor, Paul Bueno de Mesquita, (401-874-4216), anonymously, if you choose. In addition, you may contact the office of the Vice Provost for Graduate Studies, Research and Outreach, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

Your signature on this form means that you have read the consent form and understand the information and you agree to participate in this study.

Signature of Participant

Signature of Researcher

Printed Name

Typed/printed name

Date

Date

Please sign both consent forms, keeping one for yourself.

Appendix F

FOURTH GRADE TEACHER CONSENT FORM FOR RESEARCH

The University of Rhode Island
Department of: School Psychology
Address: 416 Chafee Building
Kingston, RI 02881

Title of Project: Evaluation of a Social Skills Training Curriculum

Dear Teacher:

My name is Kim Sherman and I am a school psychology doctoral student at the University of Rhode Island. I am requesting permission for your participation in the research study described below. If you have any questions about this study, you should feel free to call me at 401-874-9395 and I will be happy to talk with you.

Description of the project:

The purpose of this study is to learn about the effects of an empathy training curriculum unit on children's feelings and social skills.

What will be done:

If you decide to take part in this study here is what will happen:

You will be given the opportunity to review the curriculum materials and to discuss the program with the researcher at a time that is convenient for you. You will be asked to complete a brief five-item questionnaire to help the researcher understand your feelings about the appropriateness of the curriculum for your classroom.

You will be asked to complete a 48-item multiple-choice rating scale for each of your students to answer questions about each child's social behaviors. You will be asked to complete these rating scales at two time points, approximately nine weeks apart.

You will also be asked to complete a brief nine-item questionnaire about the social skills teaching strategies that you use in your classroom.

I will teach seven weekly *Second Step* lessons with your support to your students. These lessons focus on identifying, understanding, and responding to others' feelings. Most lessons introduce concepts through large photos of children interacting and displaying emotions. The lessons involve discussion, modeling, and role play activities. Each lesson lasts 30-45 minutes and will be offered at a day/time that fits your schedule.

Approximately two weeks following the completion of the unit, you will be asked to participate in a fifteen-minute interview with the researcher. She will ask about your

thoughts on the curriculum, how it may have impacted your students and your classroom, and how it might be improved.

Risks or discomfort:

It is unlikely that you will experience any risk or discomfort in this study, although there is a time commitment. It may take five minutes to complete each rating scale, although you may finish more quickly. It may take up to one hour and forty minutes to complete the rating scales for your whole class.

Benefits of this study:

You will receive a \$20.00 gift certificate to a local store of your choice for completing the first round of rating scales. You will receive a \$25.00 gift certificate to a local store of your choice for completing the second round of rating scales.

Although direct benefits to your students cannot be guaranteed, some of your students may improve their ability to recognize and respond respectfully to others' feelings. Also, the researcher will learn more about the effectiveness of empathy training programs.

Additionally, you may enjoy this curriculum and you may find new ways to help your students develop social and emotional skills. You will have access to the curriculum materials over the course of the study (photo cards, posters, videos, suggested extension activities) and you may find these to be helpful resources in your classroom.

Confidentiality:

Your part in this study is confidential. The written report and any presentations will not include teacher, child, or school names. Names will not be used in any computer files.

The researcher will store all questionnaires and interview notes in a locked office on the URI campus. Computer files will be stored in a secure password protected computer.

Decision to quit at any time:

The decision to take part in this study is up to you. You do not have to participate. If you decide to participate, you may decide to quit at any time. If you would like to stop participating, just inform Kim Sherman (401-874-9395) of your decision.

Rights and Complaints:

If you are not satisfied with the way this study is performed, you may discuss your concerns with me, Kim Sherman, (401-874-9395) or with my supervising professor, Paul Bueno de Mesquita, (401-874-4216), anonymously, if you choose. In addition, you may contact the office of the Vice Provost for Graduate Studies, Research and Outreach, 70 Lower College Road, Suite 2, University of Rhode Island, Kingston, Rhode Island, telephone: (401) 874-4328.

Your signature on this form means that you have read the consent form and understand the information and you agree to participate in this study.

Signature of Participant

Signature of Researcher

Printed Name

Typed/printed name

Date

Date

Please sign both consent forms, keeping one for yourself.

Appendix G

Warm-up to Bryant's Index of Empathy for Fourth-Graders

I'm going to read you some statements that may or may not describe you. I want you to let me know if a statement describes you or not. These statements are about how you would think and feel in many different situations. There are no right or wrong answers, just let me know which statements describe you. No one but myself will see your answers to these statements; your parents won't see them, only me. Remember, this is not a test, so you can relax. Since there are no right or wrong answers, everyone will have different answers. That is O.K. I am just interested in how children your age feel about these things.

I will read you a statement, and I would like you to let me know how you think or feel by circling either "yes" or "no," whichever describes how you would feel about the statement. For example, look at example A at the top of your paper. "I like to eat Spinach." Are you able to find this example? Next to the statement "I like to eat spinach" are the words "Yes" and "No." I would like you to circle the word which best describes how you would feel about eating spinach. Some people like to eat spinach, so they would circle "yes" and some people don't like to eat spinach and they would circle "no." Either answer is O.K. to make depending on how you feel about spinach. Do you understand how you would let me know what you think? Let's try another example. Here is example B, "I don't like ice cream." Circle "Yes" if this statement describes you, and circle "No" if this statement does not describe you. O.K.? Let's try the next statement . . . (Bryant, 1982).

Appendix H

Warm-up to Bryant's Index of Empathy for First-Graders

I'm going to read you some statements that may or may not describe you. I want you to let me know if a statement describes you or not. These statements are about how you would think and feel in many different situations. There are no right or wrong answers, just let me know which statements describe you. No one but myself will see your answers to these statements; your parents won't see them, only me. Remember, this is not a test, so you can relax. There are no right or wrong answers. I am just interested in how children your age feel about these things.

I will read you a statement, and I would like you to let me know how you think or feel by putting your card in one of these two envelopes. If a statement is true about you, then put your card in this envelope that says, "Me." If the statement is not true about you, then put your card in this envelope that says, "Not me." Choose either "Me" or "Not me," whichever describes how you feel.

For example, this card says, "I like to eat Spinach." I would like you to put your card in the envelope which best describes how you would feel about eating spinach. Some people like to eat spinach, so they would put the card in this "Me" envelope and some people don't like to eat spinach and they would put the card in the "Not me" envelope. Either answer is O.K. to make depending on how you feel about spinach. Do you understand how you would let me know what you think?

Let's try another example. This card says, "I don't like ice cream." Put your card in the "Me" envelope if this card describes you, and put it in the "Not me" envelope if it does not describe you. O.K.? Let's try the next one . . . (Bryant, 1982).

Appendix I

Bryant's Index of Empathy

Example A: I like spinach.

Example B: I don't like ice cream.

1. It makes me sad to see a girl who can't find anyone to play with. (+)
2. People who kiss and hug in public are silly. (-)
3. Boys who cry because they are happy are silly. (-)
4. I really like to watch people open presents, even when I don't get a present myself. (+)
5. Seeing a boy who is crying makes me feel like crying. (+)
6. I get upset when I see a girl being hurt. (+)
7. Even when I don't know why someone is laughing, I laugh too. (+)
8. Sometimes I cry when I watch TV. (+)
9. Girls who cry because they are happy are silly. (-)
10. It's hard for me to see why someone else gets upset. (-)
11. I get upset when I see an animal being hurt. (+)
12. It makes me sad to see a boy who can't find anyone to play with. (+)
13. Some songs make me so sad I feel like crying. (+)
14. I get upset when I see a boy being hurt. (+)
15. Grown-ups sometimes cry even when they have nothing to be sad about. (-)
16. It's silly to treat dogs and cats as though they have feelings like people. (-)
17. I get mad when I see a classmate pretending to need help from the teacher all the time. (-)
18. Kids who have no friends probably don't want any. (-)
19. Seeing a girl who is crying makes me feel like crying. (+)
20. I think it is funny that some people cry during a sad movie or while reading a sad book. (-)
21. I am able to eat all my cookies even when I see someone looking at me wanting one. (-)
22. I don't feel upset when I see a classmate being punished by a teacher for breaking school rules. (-)

For items with a (+), an answer in the affirmative contributes to an empathic tendency. For items marked with a (-) an answer in the negative contributes to an empathic tendency.

Fourth-graders respond by circling Yes/No. First-graders place cards in an envelope marked "Me" or "Not me" (Bryant, 1982).

Appendix J

Social Skills Rating System Elementary Self-Report Items

1. I make friends easily.
 2. I smile, wave, or nod at others.
 3. I ask before using other people's things.
 4. I ignore classmates who are clowning around in class.
 5. I feel sorry for others when bad things happen to them.
 6. I tell others when I am upset with them.
 7. I disagree with adults without fighting or arguing.
 8. I keep my desk clean and neat.
 9. I am active in school activities such as sports or clubs.
 10. I do my homework on time.
 11. I tell new people my name without being asked to tell it.
 12. I control my temper when people are angry with me.
 13. I politely question rules that may be unfair.
 14. I let friends know I like them by telling or showing them.
 15. I listen to adults when they are talking to me.
 16. I show that I like compliments or praise from friends.
 17. I listen to my friends when they talk about problems they are having.
 18. I avoid doing things with others that may get me in trouble.
 19. I end fights with my parents calmly.
 20. I say nice things to others when they have done something well.
 21. I listen to the teacher when a lesson is being taught.
 22. I finish classroom work on time.
 23. I start talks with class members.
 24. I tell adults when they have done something for me that I like.
 25. I follow the teacher's directions.
 26. I try to understand how my friends feel when they are angry, upset, or sad.
 27. I ask friends for help with my problems.
 28. I ignore other children when they tease me or call me names.
 29. I accept people who are different.
 30. I use my free time in a good way.
 31. I ask my classmates to join in an activity or game.
 32. I use a nice tone of voice in classroom discussions.
 33. I ask adults for help when other children try to hit me or push me around.
 34. I talk things over with classmates when there is a problem or an argument.
-

On this paper and pencil measure fourth-grade participants rated the frequency of each behavior on a three-point scale: *never*, *sometimes*, *often* (Gresham & Elliott, 1990).

Appendix K

Social Skills Rating System Teacher Report: Social Skills

1. Controls temper in conflict situations with peers.
 2. Introduces herself or himself to new people without being told.
 3. Appropriately questions rules that may be unfair.
 4. Compromises in conflict situations by changing own ideas to reach agreement.
 5. Responds appropriately to peer pressure.
 6. Says nice things about himself or herself when appropriate.
 7. Invites others to join in activities.
 8. Uses free time in an acceptable way.
 9. Finishes class assignments within time limits.
 10. Makes friends easily.
 11. Responds appropriately to teasing by peers.
 12. Controls temper in conflict situations with adults.
 13. Receives criticism well.
 14. Initiates conversations with peers.
 15. Uses time appropriately while waiting for help.
 16. Produces correct schoolwork.
 17. Appropriately tells you when he or she thinks you have treated him or her unfairly.
 18. Accepts peers' ideas for group activities.
 19. Gives compliments to peers.
 20. Follows your directions.
 21. Puts work materials or school property away.
 22. Cooperates with peers without prompting.
 23. Volunteers to help peers with classroom tasks.
 24. Joins ongoing activity or group without being told to do so.
 25. Responds appropriately when pushed or hit by other children.
 26. Ignores peer distractions when doing class work.
 27. Keeps desk clean and neat without being reminded.
 28. Attends to your instructions.
 29. Easily makes transition from one classroom activity to another.
 30. Gets along with people who are different.
-

For items 1-30, teachers use a three-point scale to rate the frequency with which a child displays each behavior. They use a separate three-point scale to indicate how important each behavior is to success in their classrooms (Gresham & Elliott, 1990).

Appendix L

Social Skills Rating System Teacher Report: Problem Behaviors

31. Fights with others
 32. Has low self-esteem
 33. Threatens or bullies others.
 34. Appears lonely
 35. Is easily distracted.
 36. Interrupts conversations of others.
 37. Disturbs ongoing activities.
 38. Shows anxiety about being with a group of children.
 39. Is easily embarrassed.
 40. Doesn't listen to what others say.
 41. Argues with others.
 42. Talks back to adults when corrected.
 43. Gets angry easily.
 44. Has temper tantrums.
 45. Likes to be alone.
 46. Acts sad or depressed.
 47. Acts impulsively.
 48. Fidgets or moves excessively.
-

For items 31-48, teachers use a three-point scale to rate the frequency with which a child displays each behavior (Gresham & Elliott, 1990).

Appendix M

Intervention Acceptability Checklist

Please rate your level of agreement with each of the following statements, where 1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, and 5 = Strongly Disagree.

1. This program is likely to have a positive impact on my students' empathy and social behaviors.

1 2 3 4 5

2. This program is appropriate for a variety of children in my classroom.

1 2 3 4 5

3. I like the procedures that will be used in this program.

1 2 3 4 5

4. The 30-45 minute weekly lessons will fit into my classroom schedule.

1 2 3 4 5

5. I am comfortable discussing children's feelings in my classroom.

1 2 3 4 5

6. I am comfortable modeling prosocial behaviors in my classroom.

1 2 3 4 5

7. Role play activities, in which children are out of their seats planning and performing brief skits, are acceptable in my classroom.

1 2 3 4 5

Appendix N

Second Step Social-Emotional Learning Checklist

Directions: Indicate how often these events occurred in the past week outside of Second Step lesson instruction by placing a check in the appropriate column.

1. I asked students to generate or evaluate solutions to a social problem (classroom problem, historical problem, and so on).
 2. I discussed perspective-taking with my students.
 3. I discussed upcoming opportunities when students might use social problem-solving skills and steps on their own.
 4. I discussed upcoming opportunities when students might use anger-management strategies and steps on their own.
 5. I modeled “thinking out loud” about perspective-taking, problem-solving, or anger-management strategies that I might use.
 6. I intervened in a student conflict by asking students to report how the other party felt about the conflict.
 7. I intervened in a student conflict by prompting students to use social problem-solving strategies.
 8. I intervened in a student conflict by prompting students to use anger-management strategies.
 9. I asked students to help make decisions that affected the whole class.
-

Participants respond to each item by checking one of the following options:
Never, Once, 2-3 times, or 4+ Times (Committee for Children, 2004).

Appendix O

Post-Intervention Semi-Structured Interview

1. Did you notice any changes in student behavior over the course of our intervention? Did you ever observe students making connections to program principles outside of *Second Step* lesson time?
2. In the past few weeks have you noticed any additional changes in student behavior? Have you observed students making connections to program principles?
3. Are you doing anything differently in your classroom since beginning this program?
4. Are there any elements of the program that you think you will continue to use in your classroom?
5. What recommendations would you make for future implementations of this program? Is there anything that could be changed that might improve the program?

Appendix P

Second Step Scope and Sequence: First Grade Empathy-Training Unit

Lesson	Title	Topics
1	Introduction to Empathy Training	Introduction to <i>Second Step</i> and group discussion skills
2	Identifying Others' Feelings	Using physical and verbal clues to identify others' feelings
3	Looking for More Clues	Using situational, physical, and verbal clues to identify others' feelings
4	Identifying Our Own Feelings	Exploring how internal and external clues help us recognize our own feelings
5	Communicating Feelings	Finding and sharing with a trusted, empathic adult as a way of coping with uncomfortable feelings
6	Similarities and Differences	Recognizing that people can have different feelings about the same situation.
7	Feelings Change	Exploring how people's feelings can change.
8	Predicting Feelings	Predicting others' feelings as a result of our own or others' actions.

Committee for Children (2002)

Appendix Q

Second Step Scope and Sequence: Fourth Grade Empathy-Training Unit

Lesson	Title	Topics
1	Introduction to Empathy Training	Introduction to <i>Second Step</i> and group discussion skills. Recognizing feelings and how feelings change.
2	Preferences and Conflicting Feelings	Recognizing that people can have conflicting feelings and different preferences that can change over time.
3	Identifying Others' Feelings	Using physical and verbal clues to identify others' feelings.
4	Similarities and Differences	Recognizing that people can have different feelings about the same situation.
5	Perceptions	Understanding how and why people perceive situations differently.
6	Intentions	Being aware of not attributing hostile intent.
7	Expressing Concern	Showing concern for others.

Committee for Children (2002)

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