STRONG START: IMPACT OF DIRECT TEACHING OF A SOCIAL-EMOTIONAL LEARNING CURRICULUM AND INFUSION OF SKILLS ON EMOTION KNOWLEDGE OF FIRST GRADE STUDENTS

by

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A DISSERTATION

Presented to the Department of Special Education
and Clinical Sciences
and the Graduate School of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Doctor of Philosophy

September 2009

University of Oregon Graduate School

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An Abstract of the Dissertation of

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in the Department of Special Education and Clinical Sciences

to be taken June 2009

Title: STRONG START: IMPACT OF DIRECT TEACHING OF A SOCIAL-EMOTIONAL LEARNING CURRICULUM AND INFUSION OF SKILLS ON EMOTION KNOWLEDGE OF FIRST GRADE STUDENTS

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Given the staggering prevalence of 12-22% of school children with mental health problems and the paucity of effective mental health services available, it is essential that professionals examine alternative methods for providing social and emotional support to children (Greenberg, Bumbarger, & Domitrovich, 2001). Rather than continuing with a service delivery approach that is reactive, fragmented, and inefficient, professionals are called to consider a more preventive approach that ensures the health of *all* children. A public health model of intervention can provide a conceptual framework for mental health service delivery in its aim to serve an entire population and to provide multi-tiered support (universal, targeted, indicated) that increases in intensity based on the needs of individual persons (Coie et al, 2000).

Members of the Oregon Resiliency Project, a research effort at the University of Oregon, have spent the last several years developing one such set of SEL curricula, appropriate for children in grades pre-k-12, the *Strong Kids* programs, *Strong Start: K-2,* (Merrell, Parisi, & Whitcomb, 2007), is a component of *Strong Kids*, developmentally applicable to kindergarten through second grade students. The purpose of this study was to implement a pilot or feasibility study that examined the impact of *Strong Start* on first grade students' social-emotional knowledge skills, with a particular emphasis on emotion knowledge, social behavior and affect. Pretest data collection of *Strong Start* began in Fall 2007 in 4 classrooms in a suburban, northwestern school district. Implementation of the intervention occurred in Winter 2008 and posttest data were gathered in Spring 2008. Results indicated that *Strong Start* was implemented with integrity, and that significant increases in studemts' knowledge about emotion situations and significant decreases in students' internalizing behaviors were associated with exposure to the program. Limitations of this study as well as directions for future research are discussed.

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ACKNOWLEDGMENTS

I wish to express sincere appreciation to Drs. Anderson, Stormshak, Seeley, and Hodges for their assistance in the preparation of this manuscript. In addition, special thanks are due to Dr. Kenneth Merrell, whose valuable guidance and support was instrumental in the realization of this work. I also want to thank educators, students, and parents who participated in this study. The investigation was supported by The Melissa Institute for Violence Prevention and Treatment.

To Stuart, Jack, and Caeli— Thank you for your endurance. I love you all.

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CHAPTER I

INTRODUCTION

The Problem

The prevalence of school-age children with mental health problems across this nation is alarming, and calls for attention. According to Greenberg, Bumbarger, and Domitrovich (2001), between 12 and 22 % of children under the age of 18 have social and emotional problems significant enough to require mental health services; approximately, 7.5 million children struggle with one or more diagnoses such as depression, anxiety, or ADHD. Services provided to children are largely reactive and costly, reaching children once they have spiraled into mental health crises. Given the large numbers of children in need of services, the limited number of professionals qualified to provide effective services, and the financial strain such services often place on families, many children are left under-served (Coie, Miller-Jackson, & Bagwell, 2000; Merrell, 2001; Roeser & Eccles, 2000).

Compounding such issues is the fact that our nation is growing increasingly more diverse in terms of culture, SES, disability status, family dynamics etc., and many children are entering schools having been exposed to varied risk factors. Factors such as poverty, harsh parenting, maltreatment, and marital conflict/family dysfunction, for example, all can potentially work to negatively impact a child's social, emotional, and academic development (Doll & Lyon, 1998; Greenberg et al., 2001). Given these

circumstances, many young children are entering school and are not "ready to learn" (Raver, 2002). A survey of 3,000 teachers, geographically representative of the United States, for example, indicated that 30% of teachers felt half of the students in their kindergarten class did not display necessary skills in academics (e.g. pre-literacy and vocabulary skills) and social-emotional competence. They reported that these children typically struggled with following directions and working with one another (Rimm-Kaufman, Pianta, & Cox, 2000).

Furthermore, those children who are entering school without appropriate readiness skills are also less likely to be equipped with emotion knowledge skills (Izard, Fine, Schultz, Mostow, Ackerman, & Youngstrom, 2001). Emotion knowledge skills, defined as one's ability to identify and label emotions in oneself and in others, have been found to be an important predictor of social behavior, self-reported internalizing symptoms in later elementary years, attentional control and academic competence(Izard et al., 2001; Fine, Izard, Mostow, Trentacosta, & Ackerman, 2003; Trentacosta, Izard, Mostow & Fine, 2006). Children who struggle with identifying their emotions also typically have trouble determining appropriate strategies for managing emotions (Denham & Weissberg, 2004). Those with such emotion regulation/management problems are more likely to be rated as less well-liked by peers and teachers (Denham & Weissberg, 2004), and peer rejection has been correlated with negative outcomes such as school dropout and juvenile delinquency (Raver, 2002).

Given the realities of young children entering school today and national mandates such as the No Child Left Behind Act, teachers are under significant pressure to foster the development of children academically, socially, and emotionally. These teachers likely

experience high levels of stress as they allocate the most time and energy to helping students meet expectations for academic accountability while simultaneously having to handle students' diverse behavioral and emotional needs (Berryhill & Prinz, 2003; Roeser & Eccles, 2000). Although social-emotional competence is an important foundation for academic success (Elias, Zins, Greenberg, & Weissberg, 2003), academic mandates tend to dominate school resources in terms of time and money, leaving fewer resources allocated to promoting social and emotional competence (Raver, 2002).

Social and Emotional Learning

Children who acquire emotion knowledge and emotion regulation skills early in life may be able to respond prosocially to others and may demonstrate attentional control and academic competence in the classroom (Crick & Dodge; 1994; Denham, Blair, DeMulder et al., 2003; Denham & Weissberg, 2004; Trentacosta et al., 2006; Joseph & Strain, 2003). For example, Denham et al., (2003) found that preschoolers' emotion knowledge uniquely predicted social competence in kindergarten. This relationship might suggest that students who are able to understand emotions of others may also be able to be more responsive to peers in the classroom. Furthermore, Trentacosta et al. (2006) found that emotion knowledge was related to teacher observations of first and second graders' competence in attending to academic tasks. This study suggests that emotion knowledge not only plays a role in one's social competence but also may influence academic outcomes. To ensure that all children acquire and practice such critical foundation skills, school professionals are called to recognize and adopt Social and Emotional Learning (SEL) practices. SEL innovations provide a framework for schools aiming to prevent student mental health problems and negative outcomes and build social

and emotional competencies. SEL includes systematic and cohesive instruction designed to teach social and emotional skills to children and adolescents. The aim of SEL is to promote wellness and to intervene with mental health issues that have already emerged (Greenberg, Weissberg, Utne O'Brien, et al., 2003).

For an SEL program to be most effective it must address students' developmental needs across multiple years; it must include a direct intervention component; and practice of relevant skills must be systematically embedded over time and across settings. For these programs to be acceptable in schools they must have a documented evidence-base, be reasonable to implement, and be visible to/involve families and community members (Denham & Weissberg, 2004; Elias, Zins, Greenberg et al., 2003; Greenberg, Weissberg, Utne-O'Brien, et al, 2003).

Strong Start

Strong Start is one such SEL program. *Strong Start* is part of a continuum of SEL curricula, appropriate for children in grades k-12, and developed by researchers at the University of Oregon. Although the components of the curricula geared toward middle and high school students (e.g., *Strong Kids, Strong Teens*) have been studied extensively and have resulted in increases in participants' content knowledge, and small reductions (in some studies) in depressive symptoms (Merrell, Juskelis, & Tran, 2004), *Strong Start* (Merrell, Parisi, & Whitcomb, in 2007), applicable to kindergarten through second grade students, has only recently been developed. Initial field testing and systematic implementation efforts regarding *Strong Start* have been very encouraging; this study was one of the first more formalized feasibility studies conducted to date.

Strong Start has been developed to contribute to theory, knowledge, and practice in the following ways:

1. *A SEL curriculum that has been carefully-designed and is developmentally appropriate will be provided to administrators and teachers of kindergarten through second grade students.* This curriculum will aid teachers as they educate children in building relevant skills such as identifying emotions, expanding emotion vocabulary, recognizing emotions in others, being a good friend, and resolving conflict.
2. *A SEL curriculum that is not resource intensive and that builds on materials and resources already available to teachers will be accessible to school professionals.* This curriculum is comprised of one small instructional manual that includes an extensive and easily accessible children's literature list organized by lesson topic, reproducible activities, and ideas for relevant puppets/stuffed animals, games and songs. Ten brief lessons are included with ideas for providing "booster" review sessions over the course of the school year.
3. *A SEL curriculum with explicitly stated strategies for infusion of skills throughout the school day and across settings will be provided to school professionals.* This curriculum provides extensive tips for teachers as they help children to apply what they have learned throughout the school day. Parent newsletters delineating the content of each lesson are available and include strategies for parents as they help their children use important social and emotional skills and vocabulary at home.

The Current Study

The current study was primarily based on the idea that emotion knowledge and self-management of emotions are critical foundation skills and important predictors of mental health, school adjustment, and academic success (Denham & Weissberg, 2004). To interact with others successfully, one must be skilled in the complex process that includes the identification of emotions, self-management of emotions, recognition of emotions in others, and decision-making that addresses the emotions and goals of both parties involved (Crick & Dodge, 1994; Denham, 2006; Denham & Weissberg, 2004; Halberstadt, Denham, & Dunsmore, 2001). Based on this notion, one hypothesis central to the current study was that children exposed to a developmentally appropriate social-emotional learning curriculum would experience an increase in emotion knowledge, self-management of emotions, and social problem-solving skills.

The current study was also grounded in the concept that the skills mentioned above can be explicitly taught and reinforced by caring adults such as teachers, parents, and/or community members. *Effective and efficient programs that address social-emotional skills are not simply curricular lessons taught just once per week; rather they are those that systematically integrate teaching opportunities throughout a variety of time periods and across numerous contexts* (Denham & Weissberg, 2004; Elias et al., 2003; Greenberg et al., 2003). The purpose of this study was to evaluate the impact of an SEL curriculum, implemented under ideal conditions, on young children's development of emotion knowledge, self-management of emotions, and social problem-solving skills. This project also monitored teacher, student, and parent acceptability of the curriculum and overall fidelity and quality of implementation.

This study was designed to answer the following questions: (a) Does the implementation of *Strong Start* result in increased knowledge of social and emotional skills in first graders? (b) Does the implementation of *Strong Start* result in teachers' perceived improvement in social behavior and affect among children in their classrooms? (c) Do teachers infuse the concepts presented in *Strong Start* over time? (d) Do teachers, students, and parents find *Strong Start* to be a socially valid intervention? (e) To what extent is student performance on an assessment of social and emotional knowledge skills correlated with teacher report of social behavior and affect?

CHAPTER II

LITERATURE REVIEW

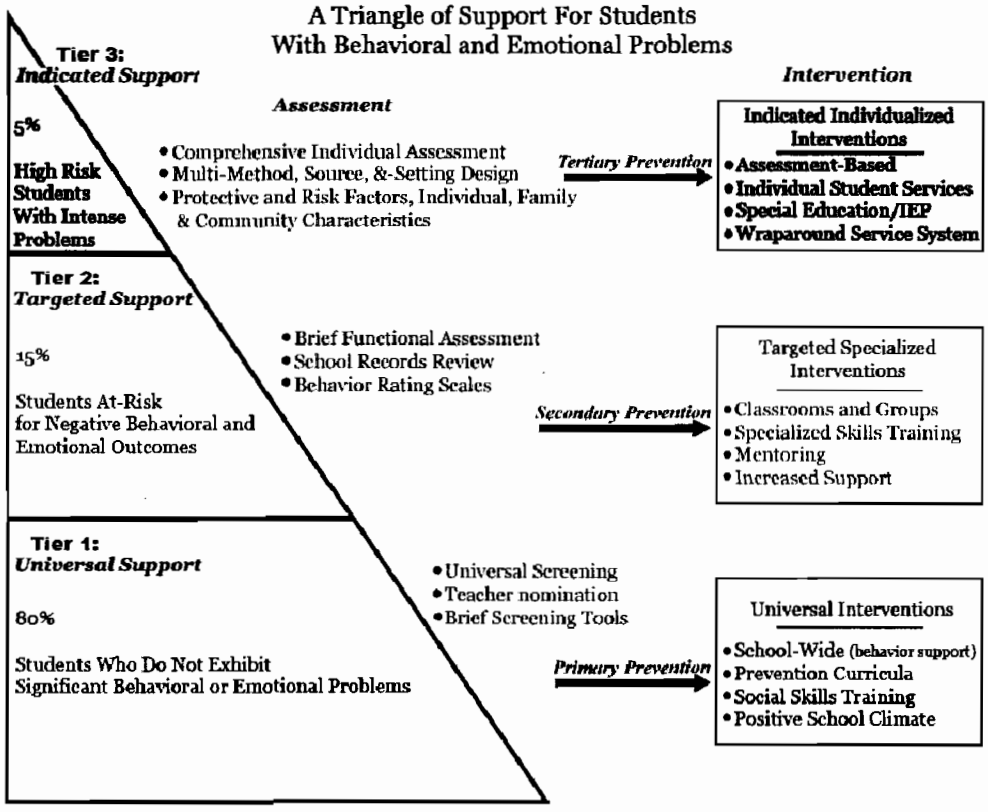
A Preventive Approach

In modern society, many school children are experiencing significant social and emotional problems, along with increased academic expectations and pressures (Greenberg et al., 2001; Roeser & Eccles, 2000). As the United States continues to grow and diversify culturally and economically, more students are entering schools "at-risk" for developing social-emotional and behavioral difficulties (Doll & Lyon, 1998). Services are often costly and inefficient, and the number of mental health service providers is limited. These current circumstances make it hard for children to access appropriate care, leaving many underserved, which further increases their risk of experiencing negative social and academic outcomes, such as academic failure, juvenile delinquency, and suicide (Coie, Miller-Jackson, & Bagwell, 2000; Merrell, 2001; Roeser & Eccles, 2000).

In addition, public education today often requires teachers to do more with less. Class sizes are increasing in many cases, and standards to ensure academic accountability and school safety are emphasized while school budgets are failing to rise in proportion to the increased demands (Horner, Sugai, Todd et al., 2005). Considering the current state of children's mental health and the increased pressures experienced in schools, teachers are working harder than ever and are experiencing more stress as they attempt to manage and engage children who are struggling socially and emotionally (Roeser & Eccles, 2000).

Given the limited reach of effective mental health services for children and the strain that this paucity of services puts on students and teachers in schools, some state departments of education are instituting mental health initiatives that require schools to implement practices directly targeting all children's healthy social and emotional development (e.g., Illinois Children's Mental Health Act 93-0495). Professionals are being called to re-conceptualize service delivery for children in schools. Rather than continuing with a service delivery approach that is reactive, professionals are challenged to consider a more preventive approach that ensures the health of *all* children. A public health model of intervention, an increasingly accepted model in the education field, can provide a conceptual framework for school-based mental health service delivery in its aim to serve an entire population and to provide multi-tiered support that increases in intensity based on the needs of individual persons. Tiers of support are typically conceptualized as *Universal, Targeted,* and *Indicated* (or *Primary, Secondary,* and *Tertiary*) (Coie et al, 2000; Horner et al., 2005; Merrell & Buchanan, 2006). Figure 1 reflects an adaptation of the public health model conceptualized by Merrell and Walker (2004) for a specific focus on students with behavioral and emotional problems.

Figure 1. A Triangle of Behavioral and Emotional Assessment and Intervention Support



A universal level of support is an essential component of a public health model and aims to provide programming that prevents risk exposure and effectively supports about 80% of a population. In considering mental health efforts for children, universal supports must not only work to prevent development of social and emotional deficits but also to increase wellness (Cowen, 1994). Interventions focusing on wellness enhancement are those that start early and address normative development in children, the role of adults in fostering social and emotional growth, and the development of healthy relationships, environments, and coping skills (Denham & Weissberg, 2004; Cowen, 1994).

Social and Emotional Learning in Young Children

Recent political initiatives addressing children's mental health have propelled forth a *universal* level (as defined above) mental health effort in the field of education known as social and emotional learning. SEL programs typically address broad-based social competencies, such as self-awareness, self-management, social awareness, relationship management, and responsible decision-making (Denham & Weissberg, 2004; Greenberg et al., 2003).

SEL programs focus on individual skill development and specific contexts of which students are part (e.g. home, school, community, etc). These programs involve direct instruction of skills as well as purposeful infusion of skills throughout school days and across settings. SEL programs are not meant to be fragmented, short-term initiatives, rather they are multi-year innovations that are threaded throughout classroom/school practices and are systematically monitored (Greenberg et al., 2003; Denham & Weissberg, 2004; Hemmeter, Ostrosky, & Fox, 2006). Currently, there are several SEL programs that have been developed and researched. Though few universal SEL curricula have been researched with extensive replication efforts, those that have been studied have resulted in increased social competence, academic engagement, and school adjustment as well as decreased aggressive behavior among students Results have also suggested improved classroom instruction and management among teachers (Greenberg et al., 2003; Joseph & Strain, 2003; Lopes & Salovey, 2003; Payton, Weissberg, Durlak, et al., 2008). In fact, in a technical report recently published by Payton et al., 180 published studies on universal SEL interventions were summarized. Mean effect sizes measuring the impact of

program use on conduct problems/emotional distress and social-emotional skill development were .23 and .60 respectively.

One example experimental study conducted by Grossman, Neckerman, Koepsell, et al. (1997) examined the impact of a SEL program called *Second Step: A Violence Prevention Curriculum* (see Committee for Children, 1992a) on second and third grade children's aggressive, prosocial and neutral behaviors. *Second Step* consists of 50-minute lessons that are usually delivered twice a week by classroom teachers. Lessons focus on teaching empathy, anger management, and social problem-solving. In this study, systematic observations of student behavior were conducted across less-structured environments (e.g. cafeteria, playground). Results of observations indicated decreases in children's use of physical aggression and increases in prosocial and neutral interactions following intervention implementation.

Webster-Stratton, Reid, and Stoolmiller (2008) also conducted a randomized trial evaluating the impact of a SEL program called the *Incredible Years Dinosaur Curriculum* paired with teacher training in classroom management strategies on preschool, kindergarten, and first grade student emotion knowledge, emotion regulation, social competence, and teacher-student interactions. The *Dinosaur Curriculum* consists of 120 lessons that can be implemented two or three times per week. Results suggested teachers involved in the study used more language pertaining to social-emotional skills in their classrooms and used fewer reprimand statements with students. Children involved showed increases in emotional regulation and social competence as measured by direct observation and also were able to identify more problem-solving strategies and identify

more examples of positive feelings as measured on the *Wally Problem Solving and Feelings Test* (see Webster-Stratton, 1990).

As SEL innovations continue to emerge in the literature, it is surprising that few specifically focus on both issues of implementation feasibility and the unique social and emotional needs of young children in the early elementary years (grades k-2). The transition into school and the transition between early grades include several significant milestones spanning a few short years (Perry & Weinstein 1998). For many children, kindergarten means an introduction to structured activities and socialization within a larger peer group. First grade and second grade includes increased academic focus and expectations. Children enduring these transitions likely possess a wide range of social and emotional skills and all perhaps experience a wide range of emotions. Prevention of social and emotional problems begins with effective early education and intervention. In addition, some leaders in the field of children's emotional and behavior disorders have argued convincingly that early prevention and intervention is key to successful outcomes, and that if these problems become well-established by the middle school grades, they are not really "curable," but require long-term management, much like diabetes or other chronic illnesses (Walker, Gresham, & Ramsey, 2004).Given that efforts to prevent mental health problems and build wellness are the goal, developmentally appropriate and feasibly implemented SEL programs for children in the primary grades are sorely needed (Raver, 2002).

Research on the emotional development of young children indicates that universal prevention efforts, such as SEL innovations, that focus on children's development of emotion knowledge are likely to be an effective starting place (Mostow, Izard, Fine &

Trentacosta, 2002). Emotion knowledge, or the ability to identify and label emotions in oneself and in others, appears to develop over time. As children grow, they become more fluent at the complex task of discriminating between emotions and understanding that one can experience multiple emotions at one time (Gross & Ballif, 2001). This development of emotion knowledge provides a foundation for successful social interactions (Fabes, Eisenberg, Hanish, & Spinrad, 2001; Izard et al., 2001). Over time, children seem to use emotional cues from the social environment to determine action (Denham & Weissberg, 2004). For example, Denham (1986b) coded preschool children's displays of emotion in the classroom and found that when engaged in an interaction that included a peer smiling, children responded in kind. When children were confronted with peers who expressed anger, they walked away (as cited in Gross & Ballif, 1991). In this study, children appeared to recognize the emotions in others, which aided in determining a response.

Many theorists have continued in pursuit of understanding the relationship between emotion and social interaction. They have developed models of social and emotional competence that directly and indirectly include emotion knowledge as an integral component. For example, the social information processing theory conceptualized by Crick and Dodge (1994) suggests that each interpersonal interaction entails a person's ability to (a) receive cues occurring within himself/herself internally (one's emotions) as well as cues being emitted externally (emotions of others); (b) accurately understand cues; (c) determine a goal for the interaction; (d) develop a response; and (e) engage in chosen behavior.

Furthermore, Halberstadt, Denham and Dunsmore (2001) build on this concept in their proposed theory of Affective Social Competence, which specifically includes a

direct emphasis on affect and is based on successfully sending and receiving messages while experiencing affect. They suggested that with each social message that is sent or received, an individual experiences awareness of affect, identification of affect, identification of relevant features within the social context (e.g., similar past experiences), and management and regulation of affect.

Some theories also consider the impact a child's temperament and the "emotional environment" of which a child is consistently a part might have on his/her ability to accurately process emotions. For example, Schultz and Izard (2001) found that a child's overall emotionality was significantly correlated with his/her ability to accurately process emotions. A relationship existed between children whose emotionality was described as "happy" and their ability to accurately identify emotions. Furthermore, a relationship existed between children identified as "angry" in terms of emotionality and their likelihood to inaccurately identify emotions. These children demonstrated attribution bias and more often used the label of "anger" to identify emotions. A partial mediational relationship also existed between children, rated as "happy" by peers, emotion processing risk status, and display of aggressive behaviors. In other words, children who were perceived as happy, were more likely to accurately process emotions and less likely to engage in aggressive behavior.

Although several promising studies and varied theories of emotional and social competence have been suggested (see Halberstadt et al., 2001), all include overlapping features and an emphasis on the key construct of emotion knowledge. Several studies conducted with children in primary grades suggest that emotion knowledge is an important foundation skill that is linked to several important outcomes. Young children

who develop the ability to accurately recognize and manage their emotions and the emotions of others early are more likely to engage in prosocial behavior, experience academic competence, and be accepted by teachers and peers, while those who do not develop these skills are more likely to exhibit aggressive behavior or social withdrawal (Denham & Weissberg, 2004; Fine, Izard, Mostow, et al., 2003; Izard, Fine Schultz et al., 2001; Mostow et al., 2002; Trentacosta et al., 2006).

For example, Izard, Fine, Schultz et al. (2001) conducted a longitudinal study in which predictor data (i.e., emotion knowledge, verbal ability, and temperament) was gathered when children were 5 years old and outcome data reflecting social behavior and academic behavior when the sample had reached third grade. When controlling for verbal ability and temperament, emotion knowledge significantly predicted both teacher-reported social and academic competence on the Social Skills Rating System (SSRS). Specifically, emotion knowledge accounted for 6-9% of the overall variance, and also significantly predicted positive behaviors such as assertion and self-control as well as negative internalizing behaviors.

School age children who complete academic tasks and engage in appropriate "school behavior" are also those described as having the ability to pay attention. Based on current literature, emotion knowledge seems to be associated with one's ability to pay attention. Specifically, Trentacosta et al.(2006), discovered a predictive relationship between emotion knowledge and attentional control when controlling for factors such as age, gender, and verbal ability. First and second grade children who were skilled in recognizing and identifying emotions were those most likely to be rated as competent in attending to tasks.

Mediational relationships between emotion knowledge and peer acceptance have also been established. Mostow et al. (2001) found that the relationship between emotion knowledge and peer acceptance was mediated by social skills or appropriate "emotion utilization" and that a uni-directional relationship exists between emotion knowledge and social skills. Furthermore, use of emotion language also appears to be associated with peer acceptance. In a study of preschooler's use of emotion vocabulary, Fabes et al. (2001) discovered children who used a wider range of emotion words and referred to the emotions of others more often, were rated as better playmates than those who did not.

Results from the studies mentioned above all have implications for social-emotional learning intervention development for children in primary grades. Programs that focus on helping children to acquire emotion knowledge and the ability to use emotion knowledge to interact with others will likely lead to positive outcomes such as acceptable social behavior and academic competence (Mostow et al., 2002). In fact, in a meta-analysis examining relationships between children's social problem-solving skills and overall adjustment, Denham and Almeida (1987) found that children specifically trained in components of effective interpersonal problem-solving demonstrated an increase in social problem solving skills post intervention.

Curriculum Design and Delivery

The role adults play in SEL programming is critical as they are the agents who promote social-emotional development through positive guidance and curriculum delivery (Denham & Weissberg, 2004; Doll, Zucker, & Brehm, 2004). SEL programming provides a framework for integrating important life skills into whole systems such as classrooms, families, and communities (Greenberg et al., 2003). Effective SEL programs

are carefully designed and include both a direct intervention component and strategies for infusing skills across various times and contexts.

One approach to developing the direct teaching component of a social and emotional learning curriculum is with careful adherence to principles of effective instruction. According to Kame'enui and Simmons (1990), effective instruction is that which emphasizes both the design and delivery of content. Lessons that are designed effectively are those that carefully consider the precise wording teachers will use to communicate new concepts. Limiting teacher wording overall, will ensure that students acquire an understanding of the intended vocabulary associated with the content of the lesson without confusion (Watkins & Slocum, 2004). The range and sequence of examples that will be used to demonstrate instances and non-instances of new concepts is critical. For example, effectively designed lessons build upon simpler skills that students have already mastered. They also include examples and non-examples of concepts that are both maximally and minimally different from one another so that students can accurately understand the scope of the concept being presented (Watkins & Slocum, 2004). Teaching formats, or scripts, may also be included to ensure accurate delivery of content (Becker, 2001; Watkins & Slocum, 2004).

While effective instructional design is a critical element in the facilitation of student learning, delivery of a curriculum is equally important. Teachers who are able to efficiently deliver content are those that maintain a brisk pace, ensure multiple opportunities for students to respond, and provide immediate and corrective feedback when necessary (Becker, 2001; Brophy & Good, 1986; Kame'enui & Simmons, 1990; Watkins & Slocum, 2004). Social and emotional instruction that includes a sequence of

modeling, rehearsing, and role-playing of new skills has also been found to enhance student learning (Joseph & Strain, 2003), and teachers who share relevant examples from their own lives are more likely to maintain student engagement (Doll, Zucker & Brehm, 2004). Furthermore, as children grow, it is important that they are exposed to literature that will nurture their social-emotional and cognitive development (Fox, Dunlap, Hemmeter, Joseph & Strain, 2003). Some of the research on social and emotional learning curricula for young children involves programs that have included relevant children's literature (see Joseph & Strain, 2003). Finally, integrating use of skills learned over time and across contexts is essential in order for students to build fluency and automaticity in appropriate social and emotional responses (Gresham, 2002).

The Current State of the Field

Given the increasing interest in SEL curricula, it is also important to note that public educators are currently strongly encouraged to embrace materials and intervention programs that are empirically-supported. Federal mandates such as the No Child Left Behind Act (NCLB) and Individuals with Disabilities Education Act (IDEA 2004) have pushed this movement forward, requiring schools to carefully study curricula prior to adoption and to only implement those with a documented evidence base. Given this reality, it is crucial that SEL programs are evaluated so that they may meet criteria for school adoption.

Demonstration of efficacy of a program, however, may not be enough to deem a program appropriate for adoption (Merrell & Buchanan, 2006). For example, in a recent review of promising social and emotional learning programs for young children, Joseph and Strain (2003) established a criteria for evaluating programs to be adopted in terms of

treatment fidelity, treatment generalization and maintenance, social validity, program acceptability, and replication across investigators, clinical groups, ethnic groups and settings. While all programs were promising and demonstrated either an increase in competency-based behavior and/or a decrease in problem behavior (depending on the questions being asked), none of the programs met all criteria for adoption, as many are in the primary stages of research in applied settings. Two of the ten programs evaluated specifically addressed acceptability of the program, and one program addressed social validity outcomes. Furthermore, all studies sampled from "at-risk" populations and varied in terms of hours per week and numbers of lessons implemented. Programs included between 12 and 140 lessons and were implemented between 10 and 120 minutes per week. Programs also varied in terms of materials included and cost. Four of the programs were relevant for children in primary grades, while the others were directed toward preschool-aged children.

Given this review of promising programs, the current political emphasis on academic accountability, and the call toward preventive practices that promote mental health, it seems that future social-emotional learning curricula and research should address global questions such as "How much instruction/time/training is enough for children to benefit?" and "How feasible and acceptable is this program in the current context?" and "Does this work with typically developing populations?" (Joseph & Strain, 2003).

Conclusion

In summary, professionals are called to shift from a paradigm of reactive and costly mental health service delivery toward one that is preventive, coordinated, and

inclusive of all children. Given that all children attend school, it is crucial that educators engage in practices that promote healthy social and emotional development and reduce risk. A focus on helping children in primary grades to develop emotion knowledge skills is appropriate, as adequate emotion knowledge appears to serve as a foundation for important positive outcomes such as social skill development, academic and attentional competence.

The current study aimed to contribute to the current status of social-emotional learning programs by providing a low-cost, brief SEL method that supports schools in their effort to integrate wellness-enhancement and critical social-emotional skill-building for all young children in an efficient manner. *Strong Start* has been specifically designed to be easily implemented and low-cost. Practitioners will not have to spend substantial school funds to implement a program that is hypothesized to enhance children's emotion knowledge. Ten brief lessons included in *Strong Start* have specifically distilled complex concepts (e.g. emotion recognition and social problem-solving) into content that is palatable for children in primary grades.

CHAPTER III

METHOD

Participants

This study was conducted in four first grade classrooms in two public elementary schools in a large suburban district in the state of Oregon. School 1 included three classrooms (referred to as Class 1, Class 2, and Class 3) and School 2 included one classroom (Class 4). A total of 88 students and 5 interventionists participated in the assessments associated with the study. Data analyzed were based on information gathered on 83 students, due to the attrition of one student from Class 1, two students from Class 2, and the addition of one student to Class 1 and Class 3 following the initial assessment period. Data analyzed were based on the assessments of 37 males and 46 females.

Schools recruited to participate were part of a district that has implemented a universal tier of positive behavior support (PBS) since the 2000-2001 school year or earlier. School-wide PBS (SWPBS) is a well-researched and comprehensive educational approach that is grounded in principles of applied behavior analysis. It specifically addresses current socially important goals—the creation of school contexts that reflect safety, health, and achievement. SWPBS emphasizes use of functional behavioral assessment (FBA) to identify contextual influences that reliably predict and maintain problem behaviors at a system level. SWPBS is not a packaged curriculum; rather it relies on consistent implementation of strategic practices that integrate a few, positively-

worded behavioral expectations for all students with teaching and reinforcement strategies that ensure behavioral success. PBS is driven by data collection procedures that objectively measure behavior and analysis approaches that are team-based and allow for further intervention planning that will support and enhance the consistent display of positive behaviors for all children across all school contexts (Horner, Sugai, Todd, & Lewis-Palmer, 2005; Lewis & Sugai, 1999; OSEP Center on Positive Behavioral Interventions and Supports et al., 2000).

During the 2007-2008 school year within this district, 75.74% of students were identified as White/Caucasian, 13.76% Hispanic/Latino, 2.67% Asian/Pacific Islander, 2.55% African American, 2.49% Native American, and 2.79% unknown ethnicity. This district provided 50.10% of students with free/reduced lunch, 17.40% of students with special education, 12.80% of students with Title I services, and 2.80% of students with English Language services. Table 1 provides further breakdown of these demographics by school. Most notable are differences between the schools in percentages of students receiving additional services such as free/reduced lunch, special education, Title I and English language services. Table 2 provides further information on the gender of participants by classroom.

Table 1

School Demographics

	School 1	School 2
Ethnicity		
White/Caucasian	83.88%	58.38%
Hispanic/Latino	8.13%	31.79%

Table 1 (continued)

Asian/Pacific Islander	3.44%	0.86%
African American	1.10%	2.31%
Native American	1.10%	5.20%
Unknown	2.35%	1.46%
Additional Services		
Free/Reduced Lunch	28.43%	62.72%
Special Education	16.74%	23.99%
Title I	13.80%	22.54%
English Language Development	0.00%	16.47%

Table 2

Student Demographic Characteristics by Class

	Male	Female	Total
Class 1	8	15	23
Class 2	10	11	21
Class 3	11	13	24
Class 4	10	10	20
Total	39	49	88

Recruitment. Prior to initiating the recruitment process, the study outlined below was approved by the Office for the Protection of Human Subjects at the University of Oregon. Upon approval, the principal investigator first contacted the district administrator responsible for coordinating positive behavior support (PBS) programming. The PBS district coordinator then presented the proposed study to building administrators in order to gauge interest. School principals interested in participating received a *Strong Start* manual and met individually with the principal investigator in August 2007. Principals nominated first grade educators within their respective buildings to participate in the study.

The classrooms ultimately represented in this study were chosen based on educator willingness, educator qualifications, and grade level of interest. Educators invited to participate expressed that they place importance on the social-emotional development of students and were willing to implement social-emotional lessons once per week. Given that educator quality is a critical element of effective curriculum implementation, preference was given to educators who had been nominated by building administrators. Building administrators were asked to nominate educators who they felt would earn scores of a four or five on a scale of one to five when asked to comment on educators' overall organization of materials, delivery of instruction, and behavior management skills. Additionally, educators were required to have at least one year of experience and have an established classroom management system in place (e.g., defined behavioral expectations, system for encouraging appropriate behaviors and discouraging inappropriate behaviors). Finally, participating educators were required to agree to not implement other formal social-emotional curricula during the course of the study. Given

that the schools had 30 minutes per week built in for each class to engage in similar types of instruction with a school counselor, the school counselor for School 1 participated in implementation of weekly lessons with three of the four participating classrooms. In the fourth classroom, the teacher implemented lessons during the counselor's typically scheduled time. All interventionists were female.

Upon obtaining educator consent to participate, the principal investigator sent letters of passive consent to the parents/guardians of students. The letter described the details of the study and provided further contact information, in case parents were interested in more information via a telephone call or email correspondence. Given that the *Strong Start* curriculum was adopted by both schools for the 2007-2008 school year, parents only signed letters if they did not want their children to participate in the assessment process. Though the curriculum and assessments were presented to students in English only, letters of consent were also offered to parents in Spanish. A total of four children did not participate in the assessments due to their parents opting to not have them involved. At the start of the study, students provided signatures on letters of assent, which described the components of the study in a developmentally appropriate way. All students whose parents allowed them to participate in assessments, gave assent. Letters of consent and assent can be located in Appendix A.

Procedures

Interventionist Training. Educators (including the school counselor) involved in teaching *Strong Start* were asked to participate in two meetings prior to implementation. The first meeting occurred two weeks prior to the first assessment period in October 2007 and gave educators an overview of the study and assessment waves that would take place

over the course of the school year. Educators signed letters of consent at this meeting. At a second meeting, occurring one-month prior to the second assessment period and initial implementation of lessons (December 2007), educators were trained in the conceptual framework driving this project and in procedures for effective implementation. Several topics were emphasized during this 2.5 hour training session. Educators were exposed to the significance of the proposed study through a presentation detailing the social and emotional development of young children and the current trends concerning the mental health of young children and service delivery provided in schools.

The second component of the training focused on the implementation of *Strong Start.* Educators were presented with a copy and oriented to the *Strong Start* manual, materials needed for each lesson, effective use of children's literature, and the importance of sending weekly newsletters home to parents. Educators were given a detailed explanation of each lesson and they were presented with information regarding the importance of fidelity of implementation. The principal investigator provided both a PowerPoint presentation outlining the lessons and modeled delivery of portions of lessons. At the close of this training session, educators were provided with details about the logistics associated with the proposed study. Educators were presented with timelines for further assessment and intervention phases and also received a $75 honorarium for participation in the after-school training.

Intervention. Strong Start is a low-cost curriculum, developed under a body of extensive research, which builds on the materials teachers are likely to have in their classrooms (e.g. relevant literature choices). It includes 10 forty-minute, activity-based lessons and 2 optional booster lessons that are easy to implement with children in the

primary grades. The *Strong Start* lessons were implemented during 14 weeks in winter and spring of 2008. During the ninth week of implementation, spring break occurred and students received no instruction. One lesson was taught per week unless a holiday, snow day, or parent-teacher conference day interfered with the regularly scheduled time for *Strong Start* lessons. These occasions happened during three weeks for all classrooms. During these weeks, educators were asked to read one additional book from the literature list provided in the previously taught *Strong Start* lesson. For this study, educators did not implement the booster lessons.

Lessons incorporated in the *Strong Start* curriculum are designed based on the principles of effective instruction. For example, each lesson includes clearly stated objectives, explicit wording to be used to articulate new concepts, relevant examples and non-examples of concepts taught, practice opportunities, and suggestions for promoting generalization of concepts across contexts and situations. Objectives stated at the outset of earlier lessons in the *Strong Start* curriculum specifically aim to enhance children's emotion knowledge and management skills by explicitly teaching students to identify a range of body cues, facial cues, and situational cues that will help them in labeling their own emotions and emotions of others. The six basic emotions featured in this curriculum (happy, sad, angry, afraid, surprised, disgusted) are those that are identifiable across cultures (Ekman & Ellsworth, 1972), and emphasis in early lessons is placed on activities that aim to build/expand children's emotion vocabulary pertaining to these basic emotions. Later lessons focus on outlining and practicing more complex strategies for effectively handling uncomfortable emotions such as anger and anxiety, making and

keeping friends, and solving problems with friends. Lessons included in *Strong Start* are presented in the Table 3 .

Table 3

Strong Start Lessons

Lesson	Content
Lesson 1: The Feelings Exercise Group	Establishing expectations and introduction to the concept of emotional strength
Lesson 2: Understanding Your Feelings, Part I	Introduction to six basic emotions and identifying which feelings make us feel "good" or "not good."
Lesson 3: Understanding Your Feelings, Part II	Identifying "Ok" and "Not Ok" ways for handling feelings
Lesson 4: When You're Angry	Identifying synonyms for anger, body cues Suggesting anger, and strategies for dealing with anger
Lesson 5: When You're Happy	Identifying synonyms for happy, basic introduction to positive thinking
Lesson 6: When You're Worried	Identifying body cues suggesting worry, strategies for letting go of worries
Lesson 7: Understanding Other People's Feelings	Identifying body clues that show how someone else is feeling
Lesson 8: Being a Good Friend	Strategies for initiating and maintaining friendships

Table 3 (continued)

Lesson 9: Solving People Problems	Strategies for handling emotions and negotiating conflict
Lesson 10: Wrapping Up	Review of key points in *Strong Start*
Booster Lessons 1 & 2	Review of key points in *Strong Start*

Strong Start lessons are scripted in order to provide those implementing the curriculum with ideas for how to communicate concepts and essential emotion vocabulary in a systematic, consistent, and developmentally appropriate way. Specific wording of concepts was carefully chosen and highlighted throughout the curriculum. Given that learning about emotions is complex and often involves covert processes, educators participating in this study were encouraged to use consistent wording in an attempt to provide children with an unambiguous, overt framework through which to understand these processes.

In addition to paying careful attention to the wording used in *Strong Start,* equal attention was given to the construction and arrangement of examples and non-examples used to teach new concepts. Educators were encouraged to model and engage students in a discussion regarding positive and negative ways to respond in certain situations and students were then invited to engage in activities during which they identified examples and non-examples of a skill. This activity was often a simple thumbs-up/thumbs-down activity that allowed educators to informally assess whether or not children accurately understood the concept or skill being taught.

Several strides were taken in the development of *Strong Start* to ensure that generalization opportunities would be offered to students. The principal investigator of this study encouraged educators to access a stuffed bear (or any other animal) to serve as a "mascot" for the curriculum. The goal was for the stuffed bear to serve as a reminder of *Strong Start* skills that had been presented over time to children in the four classes. Further visual cues aiming to prompt use of skills included printed posters of some of the strategies outlined throughout the curriculum. These posters were provided to all classrooms in an effort to prompt students to use skills when necessary.

Integrating social-emotional skills taught into the academic curriculum and every day activities is also an efficient and preferred way to ensure students are practicing their newly acquired knowledge (Langland, Lewis-Palmer & Sugai, 1998; Sugai, Bullis, & Cumblad, 1997). In *Strong Start*, lists of relevant children's literature are provided within the context of each lesson, so that educators can aim discussion of such literature toward social and emotional topics. During this study, educators were expected to read one book per week to reinforce concepts taught during that week's *Strong Start* lesson.

Each lesson also includes a section entitled, *Acknowledging What We Learned.* This section provides suggestions to classroom teachers regarding times during the day and activities within school when it would be useful to help children anticipate a potential practice opportunity. Further suggestions include possible approaches teachers may take to help students to remember particular steps of skills learned when they are in a moment of need. The final portion of this section includes prompts for teachers to provide specific acknowledgement to students when they use a *Strong Start* skill in an appropriate

situation. Over the course of this study, educators were strongly encouraged to prompt students to use skills throughout the day and to track how often they prompted students.

One final component of *Strong Start* aiming to facilitate children's generalization of skills is the *Strong Start Bulletin*. This is a one-page newsletter that accompanies each lesson and can be sent home to parents/guardians. It is a simple one-page document that explains examples of skills learned, relevant literature that was read at school and can be shared at home, and specific tips for promoting use of skills in the home environment. During this study, the *Strong Start Bulletin* was sent home each week. Given that some participants came from Spanish-speaking homes, each bulletin was translated.

In School 1, the counselor facilitated the lesson with three classrooms each week. Teachers in those classrooms were responsible for reading a book from the literature list, finishing any hands-on activities that students did not complete during the counselor's time with their class, and prompting use of *Strong Start* skills during the week. In School 2, the teacher implemented all of the *Strong Start* components stated above.

Research Design

This study was based on a within-subjects, quasi-experimental design (Keppel & Zedeck, 1989) in which all classrooms were assigned to the intervention. The design is considered quasi-experimental rather than experimental because it did not rely on a randomly selected or randomly assigned sample of students. All students participated in the *Strong Start* intervention. Time served as an element of control. The study included three data collection periods. Pretest 1data (O_1) were taken in October 2007, 13 weeks prior to collection of Pretest 2 data (O_2) in January 2008. Implementation of the first 10 lessons (X) occurred after the two pretest periods, and posttest data (O_3) were taken

immediately following implementation of the intervention in April 2008. Posttesting occurred 15 weeks following the second pretest period. Given this design, it was possible to observe within subject effects and note how typical social and emotional maturation of first grade students compares with growth that may have occurred due to participation in the *Strong Start* intervention. This approach to research design is considered appropriate when used during pilot trials of recently developed behavioral interventions/therapies (Rounsaville, Carroll, & Onken, 2001). Table 4 depicts the design used in this study.

Table 4

A Within-Subjects Quasi-Experimental Design

Groups	Pretest-1	Pretest-2	Intervention	Posttest
4 Classrooms	O_1	O_2	X	O_3

Assessment Procedures. Several assessment instruments were used to measure the efficacy of *Strong Start*, user satisfaction, and treatment fidelity. To measure student emotion knowledge skills, first grade students completed two assessments. Graduate students from the University of Oregon's school psychology program, were trained in effectively administering these assessments. Graduate students read test items aloud to groups of three or four students and students provided answers using a pencil/paper format. Graduate students then facilitated a "Simon Says" stretch break following completion of the first assessment. Assessment occurred at small tables just outside the classrooms and usually required about 15 minutes of students' time. These assessment activities occurred during pretest and posttest phases. Students were also asked to complete a social validity questionnaire at posttest phase only.

Teachers provided brief reports of the social behavior and affect of students within their classrooms. This reporting occurred during all pretest and posttest phases. Teachers were given one week at each assessment phase to complete these measures. Teachers, the school counselor and parents were also asked to complete a social validity questionnaire at posttest phase only. Teachers were provided with a 50-dollar gift card to Borders or Barnes and Noble as incentive for the time investment required for this activity. The school counselor was comparably compensated, given her involvement in lesson implementation.

Three graduate students from the University of Oregon's school psychology program were trained in observing the fidelity of *Strong Start* implementation. Training included a one hour session during which students were oriented to fidelity observation forms and practiced obtaining inter-observer agreement on a video-taped lesson that the principal investigator had developed. During the training session, all students obtained 100% inter-observer agreement with the principal investigator. Given that there were only two educators (one teacher and one counselor) who implemented the direct teaching components of each lesson, five fidelity observations were conducted in School 1 and four observations were conducted in School 2. Observations occurring in School 1 rotated amongst the three classrooms. To ensure maintenance of inter-observer agreement established during the training period, two of the observations in each setting included two observers.

Measures

Independent Variable. There was one primary independent variable: time. This is a qualitative, within-subject independent variable consisting of three levels entitled Pretest 1, Pretest 2, and Posttest.

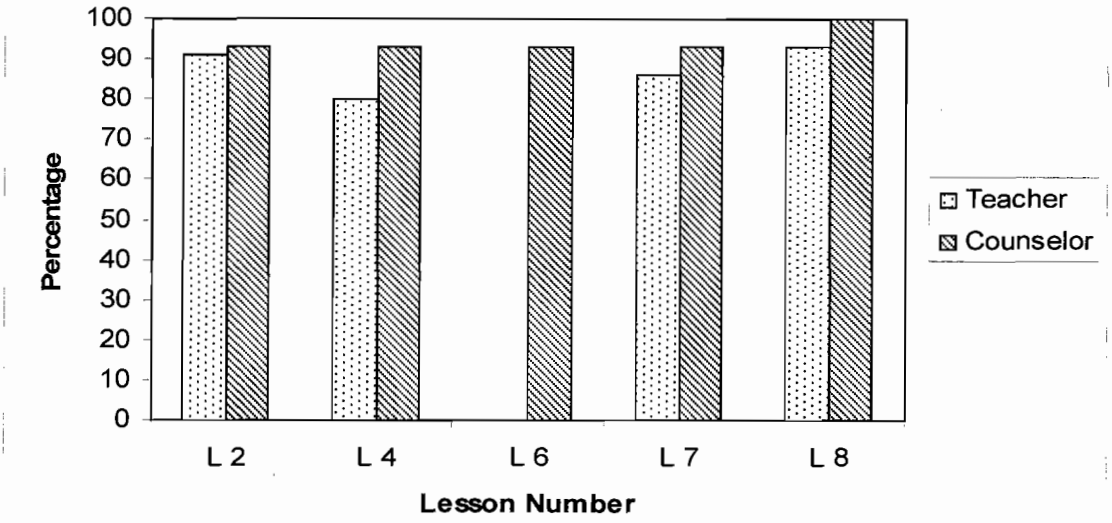
Implementation data were gathered to determine integrity of *Strong Start* implementation. Trained graduate students from the University of Oregon observed the direct teaching and student activity components of *Strong Start* lessons and recorded data on the *Implementation Checklists* (see Appendix B). Observation data obtained assessed the extent to which educators implemented the lesson components as outlined in the manual. Checklists included a concrete outline of essential topics to be covered within each lesson. Observations were scheduled. In School 1, 50% of lessons were observed and the educator's implementation of core lesson components ranged between 93% and 100%. Sixty percent of integrity checks at School 1 included a second observer in order to obtain inter-observer agreement. Following observations, the principal investigator calculated inter-observer agreement for lesson components implemented using an overall agreement method. For School 1, inter-observer agreement was 93% across all sessions. Reliability was calculated using the following formula:

$$\frac{Agreements}{Agreements + Disagreements} \text{ X } 100$$

Due to scheduling challenges, 40% of lessons were observed in School 2. At this school, the educator's implementation of lessons ranged between 80% and 93%. The educator noted that she ran out of time during the one lesson (Lesson 4) that was observed as being 80% implemented. Inter-observer agreement was calculated based on

50% of integrity checks. There was 100% agreement across components of lessons observed. Further depiction of implementation integrity can be found in Figure 2.

Figure 2. Percentage of *Strong Start* Components Implemented



Additionally, graduate student observers were required to quantify how long the lessons lasted, how often the educator provided students with opportunities to respond, how often students responded on-topic, and how often educators provided individuals/classes with praise and reprimand statements. At both schools, *Strong Start* was taught during a thirty-minute block typically allotted for activities with the school counselor. At School 1, the educator generally concluded lessons after 27 -31 minutes of instruction. At School 2, the educator concluded lessons after 26-35 minutes of instruction. Behavioral definitions used for behaviors targeted in *Strong Start* observations were adapted with permission from those developed by Martin and Rao (in preparation). Definitions are further outlined in Table 5 and examples and non-examples of definitions are provided in Appendix C.

Table 5

Definitions for Observations of Strong Start

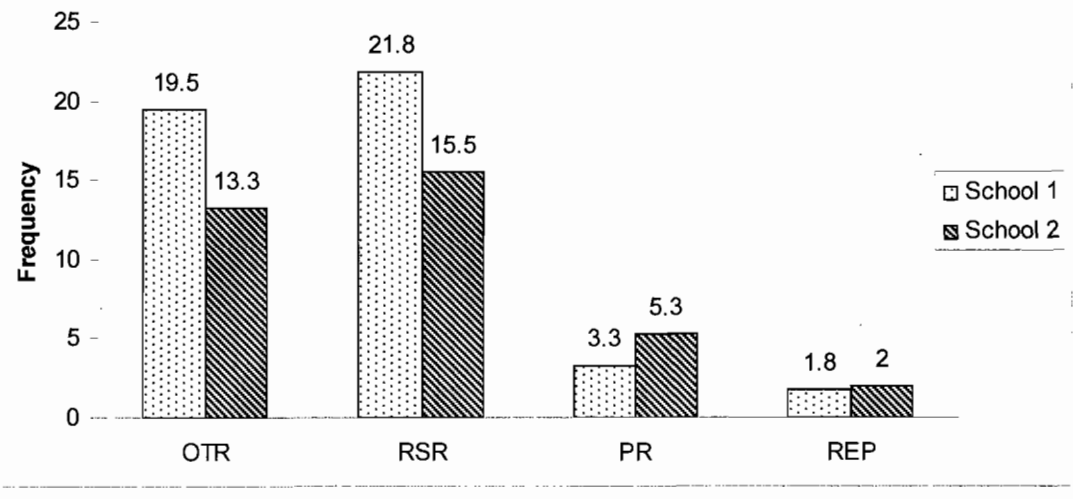
Behavior	Definition
Opportunity to Respond (OTR)	A specific, instructional question, statement or gesture made by the teacher that seeks a verbal or behavioral response from an individual or the group.
Relevant Student Response (RSR)	An oral or behavioral response provided by a student or group of students related to an OTR.
Educator Praise (PR)	An evaluative statement made by the educator that indicates approval of desired behavior or response. The interaction indicates approval based on the behavior of the student at the time the teacher attends to him or her, not the tone of the interaction. Praise statements must include an evaluative component (e.g., good, great, nice).
Reprimand/Correction (REP)	Verbal comments made by the educator indicating disapproval of student behavior. The interaction indicates disapproval based on the behavior of the student(s) at the time

Table 5 (continued)

	the educator attends to him or her, not the tone of the interaction.

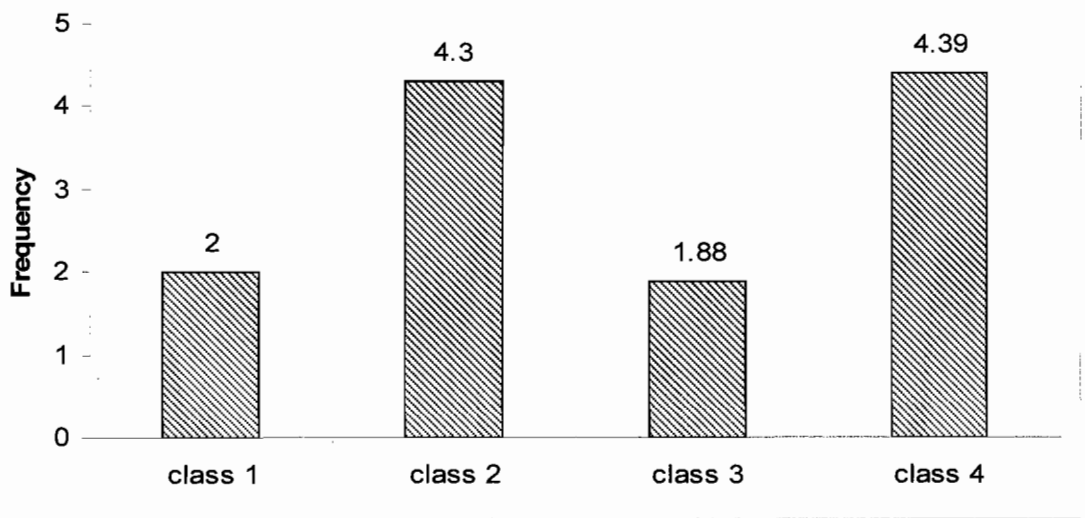
During the first 10 minutes of each integrity check, observers tallied the behaviors defined in Table 5. On average, the educator from School 1 provided more *opportunities to respond*, experienced more *relevant student responses,* provided fewer *praise* and *reprimand* statements. Further information regarding these behaviors is provided in Figure 3. During observations including two observers, inter-observer agreement was obtained for each behavior. Percent agreement for *opportunities to respond* ranged from 72% to 100%. Percent agreement for *relevant student responses* ranged from 94% to 100%. Percent agreement for *praise* ranged from 71% to 100% and the range for *reprimands* was 80%-100%.

Figure 3. Mean Behaviors Observed Across Lessons and Contexts



To determine how often teachers infused skills presented in *Strong Start* over time, all four educators received an email once per week during implementation (beginning after the completion of Lesson 2) to which they needed to state which book from the literature list was read and to respond to specific questions such as "How many times this week have you prompted students to use the *Stop, Count, In, Out* strategy in handling anger?" or "How often have you prompted students to recognize the emotions of their friends this week?" Response choices included 0 times, 1-2 times, 3-5 times, more than 5 times. Teachers ranged in their responsiveness to emails. The teacher from Class 1 responded to 67% of emails, and the teacher from Class 2 responded to 56% of emails. The teacher from Class 3 responded to 89% of emails and the teacher from Class 4 responded to 100% of emails. When they responded to emails, teachers all stated that they had read one book from the literature list during that week. Average weekly prompts by class are outlined in Figure 4.

Figure 4. Mean Number of Generalization Prompts Given Per Week



Dependent Variables. The study included three primary quantitative dependent variables. Social-emotional knowledge skills were assessed via student completion of two brief assessments. A rating of student social competence and affect was assessed via teacher report. Social validity data were gathered from students, educators (four teachers and one counselor), and parents based on a questionnaire format. The measures used are described in detail below:

1. The *Strong Start Content Knowledge Assessment (SSCK)* is a small-group administered experimental assessment that aims to measure emotion identification, emotion recognition in others, and basic social problem-solving strategies taught within the *Strong Start* curriculum (see Appendix D). The *SSCK* takes approximately 10 minutes to administer and is a paper and pencil task. There are 18 items included in the *SSCK*, and students received 1 point for each correct response on 18 items. Children responded to each item by circling or marking the picture or word that best answers the question or scenario provided. Test items include statements such as "Circle the face that shows disgust" and "Look at this boy and use body clues to tell how he is feeling. Circle one feeling." The *SSCK* was piloted in May 2007 to qualitatively determine whether or not children understand the format of the test and how many children can be administered the measure at once. During this pilot phase, the researcher determined that children could follow along with administration procedures when seated in groups of four or five students.

2. The Assessment of Children's Emotion Skills (ACES) is a standardized assessment that measures the accuracy with which children recognize emotions. There are three subscales included in this measure that pertain to children's understanding of

emotions given social behavior cues, social situation cues, and facial cues. For the purposes of this study, the 15-item social situations subscale was used (see Appendix E). Within this subscale, children are required to respond to social situations that are read aloud with "happy, sad, mad, scared, or no feeling." Items from this scale include scenarios such as "Tim's parents told him that they would take him to the fair. When it is time to go, his parents say that none of them can go. Do you think Tim feels happy, mad, scared, or no feeling?" Previous research studies (Schultz, Izard & Bear, 2004; Trentacosta et al., 2006) using the ACES resulted in emotion attribution accuracy scores that correlated moderately well (Cronbach's alpha = .68-.71).

3. Teacher report data was collected on all participating students from each classroom using a brief measure of social competence and affect adapted from the *School Social Behavior Scales, Second Edition (SSBS-2)* (Merrell, 2002) and the *Social Skills Rating System (SSRS)* (Gresham & Elliot, 1990) (see Appendix F and G). The *SSBS-2* is designed to measure social competence and antisocial behavior of students in grades kindergarten through 12. For the purposes of this study, the peer relations subscale was used. Items from the *SSBS-2* include statements such as "Is sensitive to feelings of other students" and "Controls temper when angry." Items are rated on a scale of 1 to 5 with 1 meaning that the behavior never occurs and 5 meaning the behavior frequently occurs. Previous research studies indicate that this tool has strong internal consistency (.95-.96) and strong test-retest reliability (.86-.94) with elementary school populations. The teacher rating form that is a part of the SSRS aims to measure a student's behavior in terms of social skills, problem behaviors, and academic competence. Items adapted from the *SSRS* included all questions from the subscales reflecting internalizing and externalizing

behaviors. Subscales were developed by means of factor analyses. Item examples include statements such as "Shows anxiety about being with a group of children," and "Gets angry easily." Items are rated on a scale of 0 to 2, with 0 meaning the behavior never occurs, 1 meaning the behavior sometimes occurs, and 2 meaning the behavior occurs very often. This measure has been widely studied and also has demonstrated excellent psychometric properties. Coefficients measuring internal consistency have ranged from .75 to .93. Studies measuring criterion-related and construct validity of the SSRS as compared to other similar measures have also been encouraging (see Merrell, 2002).

4. At the end of the 10-lesson *Strong Start* implementation (posttest phase), educators, students, and parents were asked to complete a social validity survey to determine the acceptability and feasibility of the program (see Appendix H). Questions were developed based on fundamentals of social validity originally outlined by Wolf (1978) and specifically targeted the social significance of the intervention, social importance of the intervention, and the social appropriateness of procedures.

The survey developed for educators and parents included statements to which individuals would respond using a 5-point likert scale. A 1 on this scale represented strongly disagree, a 2 was equivalent to disagree, a 3 meant neutral, and 4 and 5 meant agree and strongly agree respectively. Some types of questions included on the survey for educators were "My students liked Strong Start," and "The materials for Strong Start were easy to access." Questions included on the parent survey were "I was aware of what my child was learning during weekly Strong Start lessons," and "I think the parent newsletters provided helpful tips for parents/guardians."

Students answered three questions on the social validity survey. These included "I liked Strong Start," "I learned a lot during Strong Start lessons," and "My favorite part about Strong Start was_____." For the first two questions, students circled a picture indicating yes, no, or kind of. For the third question, they were asked to write in a word or draw a picture.

CHAPTER IV

RESULTS

Analytic Approach

This study was designed to answer the following questions: (a) Does the implementation of *Strong Start* result in increased knowledge of social and emotional skills in first graders? (b) Does the implementation of *Strong Start* result in teachers' perceived improvement in social behavior and affect among children in their classrooms? (c) Do teachers infuse the concepts presented in *Strong Start* over time? (d) Do teachers, students, and parents find *Strong Start* to be a socially valid intervention? (e) To what extent is student performance on an assessment of social and emotional knowledge skills correlated with teacher report of social behavior and affect?

The first two questions were addressed via a series of repeated measures analyses of variance. This approach was chosen because there were three phases of assessment, which allows the researcher to efficiently examine within-subject effects (Gardner, 2001). Additional paired *t* tests were conducted on difference scores and a chi-square was tabulated to further analyze the impact of the intervention versus typical maturation alone. The third question was addressed previously with the other features of intervention implementation. To answer the fourth question, descriptive statistics were generated and percentages of items endorsed were derived. The last question was addressed by computing bivariate correlations for all measures used across assessment waves.

Prior to running analyses to answer the research questions stated above, a series of analyses were conducted to estimate the observed reliability of the measures used, an important consideration in the overall confidence of the validity and generalizability of results. Table 6 outlines the internal consistency estimates for the behavioral rating measures at each assessment wave. Internal consistency alphas were not considered appropriate for the *Content Knowledge* and the *Assessment of Children's Emotional Skills.* Because little variance existed between items on the *Content Knowledge* measure, and because the *ACES* measure was not only brief, but also measured a knowledge of a variety of feelings across different situations, use of alpha coefficients to estimate reliability may be misleading and ineffective. In such testing situations, internal consistency coefficients are not considered as useful as observing the stability of scores for these measures over time, such as is reflected in Table 7 (Strickland, 1999). Coefficients for the *Peer Relations* scale from the *SSBS* were stable and were consistently measured at .98. *Problem Behavior* alphas as measured by the *SSRS* were also stable and coefficients ranged from .87-.88. These re-test coefficients indicate adequate to strong reliability or consistency for the two measures for which internal consistency estimates were deemed appropriate.

Table 6

Cronbach Reliability Coefficients as Measured at Two Pretest Periods and Posttest

Variable	Pretest 1	Pretest 2	Posttest
Peer Relations	.98	.98	.98
Problem Behavior	.88	.87	.88

Pearson product-moment correlation coefficients were also computed to determine the relationship between scores on measures across periods of assessment. Table 7 reflects these coefficients. It is important to note that an extensive period of time elapsed between testing periods which may limit the strength of the obtained coefficients. Statistically significant correlations for the *Content Knowledge* measure were revealed when comparing Pretest 1 and Pretest 2 ($r = .30, p < .01$) and Pretest 2 and Posttest ($r = .23, p < .05$). The correlation for Pretest 1 and Posttest was not significant ($r = .21$). For the *ACES* measure, statistically significant correlations were revealed for Pretest 1 and Pretest 2 ($r = .35, p < .01$) and Pretest 2 and Posttest ($r = .36, p < .01$). A very weak, non-significant correlation was found for the association between Pretest 1 and Posttest ($r = .12$) on this measure. For the *Peer Relations* measure, all correlations were statistically significant. Correlations between Pretest 1 and Pretest 2 were highly correlated ($r = .62, p < .01$). The correlation between Pretest 1 and Posttest was equal to .22, $p < .05$, and the correlation between Pretest 2 and Posttest was equal to .57, $p < .01$. Correlations for *Problem Behavior* were also moderately to highly statistically significant across all assessment waves and the coefficient for Pretest 1 and Pretest 2 equaled .54, $p < .01$, the coefficient for Pretest 1 and Posttest equaled .53, $p < .01$, and the coefficient for Pretest 2 and Posttest equaled .74, $p < .01$.

Table 7

Pearson Product Moment Correlation Coefficients Comparing Measures Obtained at Two Pretest Periods and at Posttest

Variable	Pretest 1 VS 2 (13 weeks)	Pretest 1 VS Post (28 weeks)	Pretest 2 VS Post (15 weeks)
Content Knowledge	.30**	.21	.23*
ACES	.35**	.12	.36**
Peer Relations	.62**	.22*	.57**
Problem Behavior	.54**	.53**	.74**

Descriptive statistics were derived for each of the measures across periods of assessment. Mean scores and standard deviations are included in Table 8. From Pretest 1 to Pretest 2 and from Pretest 2 to Posttest, participants' scores increased on the *Content Knowledge* assessment. On average students received 87%, 91%, and 93% correct on Pretest 1, Pretest 2, and Posttest respectively. On the *ACES*, from Pretest 1 to Pretest 2, students showed an overall decrease in scores. On average students scored 66% on Pretest 1 and 63% on Pretest 2. From Pretest 2 to Posttest (following the intervention), subjects showed an increase. Students scored 72% correct on average at Posttest. On both of these measures, higher scores may be indicative of more skill; however, this assumption is still somewhat unclear as both measures are essentially experimental measures. From Pretest 1 to Pretest 2 and from Pretest 2 to Posttest on the *Peer Relations* measure, subjects showed an overall increase in scores. Higher scores are indicative of more skill in relations with peers. On the *Problem Behavior* measure, subjects showed an

increase in problem behavior between Pretest 1 and Pretest 2 and a decrease in problem behavior between Pretest 2 and Posttest. Higher scores on this measure are indicative of more problem behavior. Visual representations of trends of this descriptive data are additionally provided in Figures 5 through 8.

Table 8

Means and Standard Deviations of Dependent Measures at Pretest 1, Pretest 2 and Posttest

Variable	Pretest 1	Pretest 2	Posttest
Content Knowledge	15.61 (1.55)	16.43 (0.91)	16.81 (1.02)
ACES	7.86 (1.68)	7.58 (1.96)	8.60 (1.90)
Peer Relations	38.90 (14.07)	45.98 (14.38)	51.23 (13.55)
Problem Behavior	2.39 (3.82)	3.59 (4.14)	2.99 (3.99)

Figure 5. Content Knowledge Mean Scores Across Assessment Periods

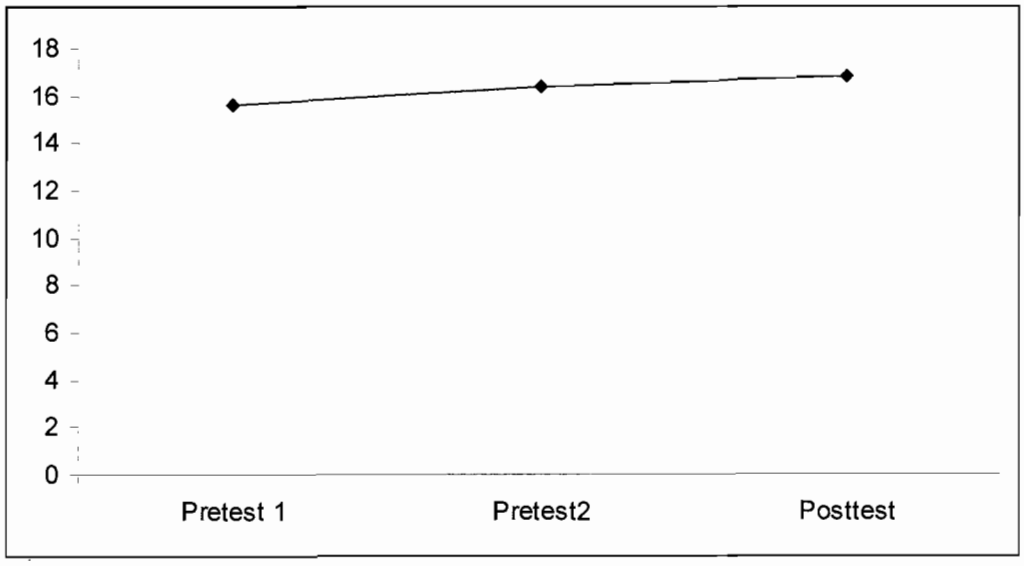


Figure 6. ACES Mean Scores Across Assessment Periods

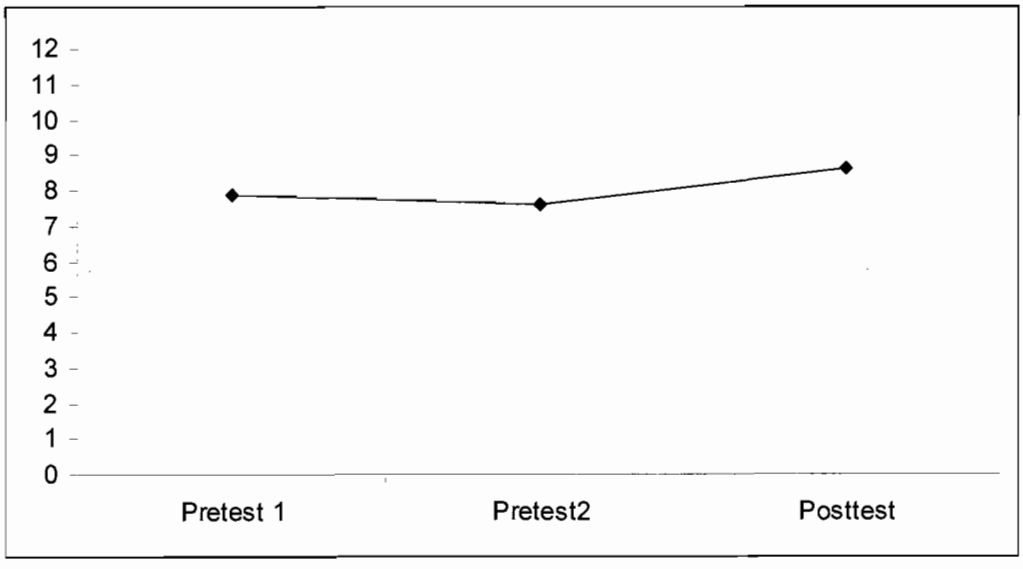


Figure 7. Peer Relations Mean Scores Across Waves of Assessment

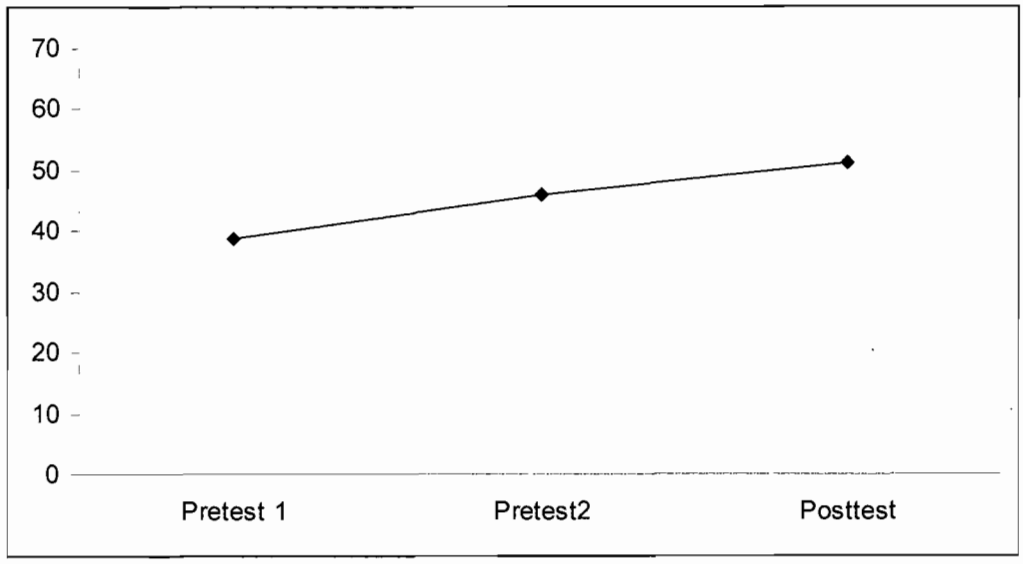
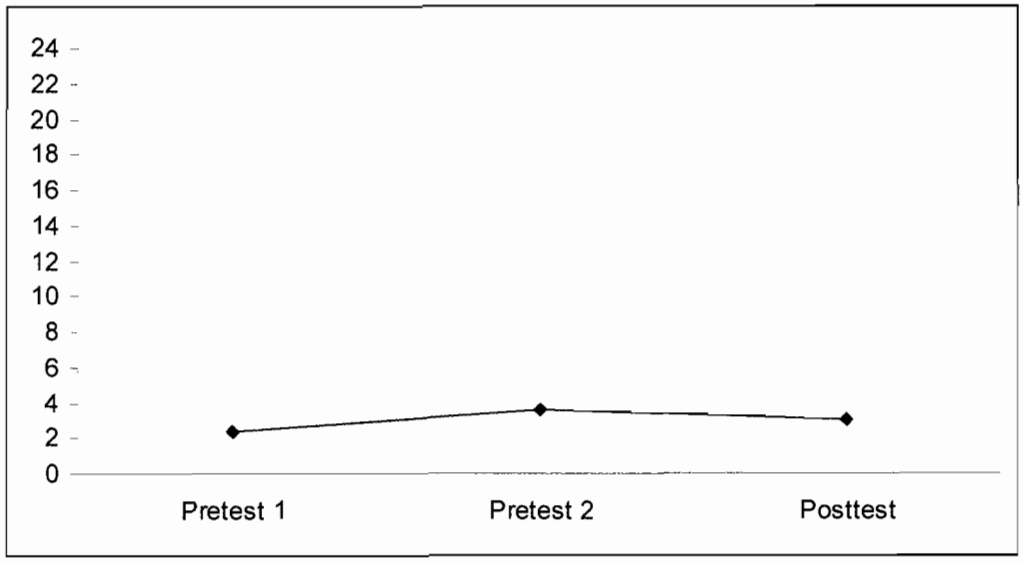


Figure 8. Problem Behavior Mean Scores Across Waves of Assessment



Repeated Measures Analyses of Variance

To answer research question 1, *does the implementation of Strong Start result in increased knowledge of social and emotional skills in first graders*, ANOVAs were conducted for the *Content Knowledge* measure and the *ACES* measure. Prior to conducting the analyses of variance, distributions were examined to ensure that ANOVAs would be an appropriate analysis. The distribution for the *Content Knowledge* measure at Pretest 1 did present as positively skewed. A "ceiling effect" was detected in that many students received high scores at Pretest 1. In an attempt to normalize this distribution, logarithmic transformations were conducted on the *Content Knowledge* scores. When examined, this transformation process did not change the skewness significantly. Items with no variance were excluded, but when an ANOVA was conducted, it did not change the overall results significantly. Given that the repeated measures ANOVA statistical test is fairly robust to violations of the assumption of normality, particularly when the skewness across observations are symmetric and the sample size large, the ANOVA was conducted based on the mean scores originally obtained (Howell, 1997). The scores from the *ACES* met the assumptions of ANOVA.

For the *Content Knowledge* measure, Mauchly's test of sphericity was significant ($W = .87, p < .05$), indicating within subjects effects would likely have a positive bias and that it was necessary to adjust degrees of freedom. The adjusted degrees of freedom are reflected in the Huynh-Feldt statistic (Gardner, 2001). The Huynh-Feldt statistic tends to be more liberal than other statistics aiming at correcting this issue (e.g. Greenhouse-Geisser) and may be more appropriately used in the context of an exploratory study (Gardner, 2001). This statistic was used and indicated a significant effect, $F = 28.10$ (2,

148), $p < .001$. This finding indicates that the change in mean scores from Pretest 1 to Posttest was likely not due to chance. Given that the omnibus F value was statistically significant, further contrast analyses were conducted to compare the means of *Content Knowledge* scores between Pretest 1 and Pretest 2, between Pretest 2 and Posttest, and between Pretest 1 and Posttest. Significance was detected between Pretest 1 and Pretest 2 with $F = 22.70$ (1, 82), $p < .001$. A significant difference was also detected between Pretest 2 and Posttest, $F = 8.35$ (1, 82), $p < .05$. Finally, a significant difference was found between the scores of Pretest 1 and Posttest, $F = 43.19$ (1, 82), $p < .001$. It is critical that the results of these contrasts are interpreted cautiously given that the assumption of sphericity was violated, making it more likely that a Type I error would occur when observing contrasts (Howell, 1997).

A similar approach was taken in analyzing the mean scores derived from the *ACES* measure. In this case Mauchly's test of sphericity resulted in an insignificant effect ($W = .97, p = .351$), meaning that no adjustments needed to be made to degrees of freedom. Again, the main effect of time was significant, $F = 9.45$ (2, 164), $p < .001$. Tests of within-subjects contrasts were conducted. Differences in mean scores between Pretest 1 and Pretest 2 were not statistically significant, $F = 1.46$ (1, 82), $p = .23$. Differences between Pretest 2 and Posttest were likely not due to chance, $F = 18.31$ (1, 82), $p < .001$. Differences between Pretest 1 and Posttest were also statistically significant, $F = 8.15$ (1, 82), $p < .01$.

To answer research question number 2, *does the implementation of Strong Start result in teachers' perceived improvement in social behavior and affect among children in their classrooms*, analyses of variance were conducted on scores derived from the *Peer*

Relations scale on the *SSBS* and from the *Problem Behavior* scale on the *SSRS.* Distributions were again examined to ensure that the assumptions of ANOVA would be met. Like the *Content Knowledge* measure, the *Problem Behavior* measure presented a negatively skewed distribution. Again, given that the ANOVA is generally robust to violations of the assumption of normality, especially when the skewness is symmetrical across observations, the test was run based on mean scores, (Howell, 1997).

For the *Peer Relations* measure, the Mauchly's test of sphericity was significant ($W = .80, p < .001$), requiring an adjustment to degrees of freedom used. The Huynh-Feldt statistic was used and indicated a significant main effect, $F = 30.71$ (2, 139), $p < .001$. This finding indicates that the differences in mean scores derived at different points in time were likely not due to chance. Within-subjects contrasts were examined. Differences in mean scores between Pretest 1 and Pretest 2 were significant, $F = 26.50$ (1, 82), $p < .001$. Differences in scores between Pretest 2 and Posttest were also significant, $F = 13.88$ (1, 82), $p < .001$. Additionally, differences in scores between Pretest 1 and Posttest were significant, $F = 42.23$ (1, 82), $p < .001$. Again, results of the contrasts should be interpreted cautiously, as the potential for Type I error to occur when sphericity is violated is likely.

For the *Problem Behavior* measure, Mauchly's test of sphericity was significant, ($W = .90, p < .05$), requiring an adjustment to the degrees of freedom used in the analysis. This issue was corrected with the Huynh-Feldt statistic. The overall main effect of time on problem behavior was significant, $F = 4.80$ (2, 152), $p < .05$. Within-subjects contrasts indicated significance between means derived at Pretest 1 and Pretest 2, $F = 8.14$ (1, 82), $p < .01$. Contrasts between Pretest 2 and Posttest were not significant, $F = 3.53$ (1, 82), p

=.06. Contrasts comparing means between Pretest 1 and Posttest were also not significant, $F = 2.1$ (1, 82), $p = .15$.

Given that the *Problem Behavior* measure was comprised of items that reflected either externalizing behaviors or internalizing behaviors, separate *externalizing* and *internalizing* variables were created and further ANOVAs were conducted on these variables. Descriptive statistics were derived for the *externalizing* score across Pretest 1 ($M = 0.99$, $SD = 2.22$), Pretest 2 ($M = 1.45$, $SD = 2.76$), and Posttest ($M = 1.45$, $SD = 2.47$). Descriptive statistics were also derived for the *internalizing* score across Pretest 1 ($M = 1.40$, $SD = 2.41$), Pretest 2 ($M = 2.16$, $SD = 2.41$), and Posttest ($M = 1.54$, $SD = 2.24$).

For the *externalizing* score, Mauchly's test of sphericity was not significant ($W = 0.96$, $p = .23$), meaning that no adjustments needed to be made to degrees of freedom. The overall main effect of time on *externalizing* behavior was not significant, $F = 2.60$ (2, 164), $p = .08$, making observations of further contrasts irrelevant. For the *internalizing* variable, Mauchly's test of sphericity was again insignificant ($W = 0.94$, $p = .07$). The overall main effect of time on *internalizing* behavior was significant, $F = 5.22$ (2, 164), $p < .01$. Contrasts comparing Pretest 1 to Pretest 2 were significant, $F = 8.22$ (1, 82), $p < .01$. Contrasts comparing Pretest 2 and Posttest were also significant, $F = 8.10$, (1, 82), $p < .01$.

Chi-Square Analysis

Given that means derived from the *Problem Behavior* represented a negatively skewed distribution and showed an increase in overall problem behavior between Pretest 1 and Pretest 2 and a non-significant decrease in problem behavior between Pretest 2 and

Posttest, further analyses were conducted. Forty-two cases that showed no problem behavior at any of the assessment waves were excluded, leaving 41 cases. Two new classification variables were derived. One variable coded those cases that showed increased problem behavior between Pretest 1 and Pretest 2 as a 1.0 and no increase in problem behavior as 0. The other variable coded cases that showed decreased problem behavior between Pretest 2 and Posttest as a 1.0 and no decrease in problem behavior as 0. A cross-tabulation revealed that 21 of the 41 (51%) students followed the trend in which they showed an increase in problem behavior between Pretest 1 and Pretest 2 and a decrease in problem behavior between Pretest 2 and Posttest. A chi-square analysis was conducted, resulting in a statistically significant result, ($\chi^2 = 12.06, p < .01$).

Difference Scores Analyses

Given that it is necessary to interpret with caution several of the contrasts in the ANOVAs that have been described, and because a critical element of this study involved observing the change in scores between testing periods, analyses of difference scores were conducted. Paired samples *t* tests of difference scores allow one to compare the changes in scores between Pretest 1 and Pretest 2 with the changes in scores between Pretest 2 and Posttest (Keppel & Zedeck, 1989). Rogosa (1988) promoted using difference scores when research questions target observations of change and suggests that this is a reliable method when true changes in individual scores are observed. To reduce experimentwise error, the alpha for each test was lowered to .01 using the Bonferroni adjustment (Sankoh, Huque, & Dubey, 1997).

The paired *t*-tests of mean difference scores on the *ACES* measure ($M = 1.30$, $SD = 3.54$) revealed statistically significant results, $t = -3.35, p < .01$. This finding indicates

that the increase in scores between Pretest 2 and Posttest reflects a statistically significant change from the decrease in scores between Pretest 1 and Pretest 2. Paired *t* tests of mean difference scores on the *SSRS* (M = -1.81, SD = 5.70) also revealed statistically significant results, $t = 2.90$, $p < .01$. This suggests the decrease in scores on problem behavior between Pretest 2 and Posttest reflects a statistically significant change from the increase in scores between Pretest 1 and Pretest 2. No statistically significant differences in difference scores were derived from the *Content Knowledge* measure or the *Peer Relations* measure.

Magnitude of Effects

In addition to null hypothesis testing, it was critical that a measure of the magnitude of the effect of time alone (Pretest 1 to Pretest 2) and time with the *Strong Start* intervention (Pretest 2 to Posttest) was obtained. Having a sense of the size of the experimental effect is essential for experimenters aiming to compare treatment effects across multiple studies (Thalheimer & Cook, 2002). Effect sizes for paired t-tests (d_z) can be calculated by subtracting the treatment mean from the control mean and dividing by the pooled standard deviation of the means, while accounting for correlation between group means (Cohen, 1988). Paired t-tests were conducted to determine effect size because the design of the current study relied on dependent observations of the dependent variables. Cohen (1988) recommended guidelines for interpreting effect sizes, in which he labeled a small effect as .20 to .49, a medium effect as .50 to .79, and a large effect as .80 or higher. Effect sizes less than .20 may not be as meaningful in this classification system; however, current discussion in the field has posited that it might be more relevant to determine "meaningful" effects by comparing effect sizes from previous studies

measuring similar interventions or by determining "normative" expectations for growth given the specific outcome variables being measured (Hill, Bloom, Black, & Lipsey, 2008). Table 9 outlines the differences in means between testing periods and the effect sizes calculated for the current study. Although small effect sizes were shown (according to Cohen's heuristic) when comparing Pretest 2 to Posttest for the *Content Knowledge* measure and the *Peer Relations* measure, the effect sizes for these measures were actually larger when comparing Pretest 1 to Pretest 2, which raises questions about the pre-test to post-test differences being a function of temporal variance rather than a function of the power of the intervention. A small-medium effect was found when comparing Pretest 2 to Posttest on the *ACES* measure. This effect was a larger effect than that shown between Pretest 1 and Pretest 2. Finally, a small effect was shown when comparing Pretest 2 to Posttest on the *Problem Behavior* measure. Though this was a non-significant difference in means, this finding could be encouraging given that given the results of the *internalizing* versus *externalizing data.*

In addition to assessing the magnitude of effects, it was also important to assess the statistical power achieved across analyses. Statistical power refers to the probability that the analysis used will avoid a Type II error (see Cohen, 1992; Hallahan & Rosenthal, 1995). In other words, power refers to the likelihood that a "non-zero" effect will be detected (Hallahan & Rosenthal, 1995). Statistical power is derived based on the effect size, the sample size, and the set α level (Cohen, 1988; Hallahan & Rosenthal, 1995). Power was calculated using the G * Power statistical program (Faul, Erdfelder, Lang & Buchner, 2007) and was typically observed at .99 or 1.00. The comparisons that estimated lower power was that between Pretest 1 and Posttest for *Problem Behavior*

(.85), the contrast comparisons for *internalizing* (.80) and main effects for *externalizing* (.51).

Table 9

Differences in Mean Scores and Effect Sizes Calculated Across Assessment Waves

Variable	Pretest 1-Pretest 2			Pretest 2-Posttest		
	Difference	*t*	ES	Difference	*t*	ES
Content Knowledge	0.82	-4.87**	0.48	0.38	-2.91*	0.35
ACES	-0.28	1.10	-0.11	1.02	-4.27**	0.47
Peer Relations	7.07	-5.23**	0.57	5.25	-3.87**	0.31
Problem Behaviors	1.20	-3.00*	0.32	-0.60	1.75	-0.19

*$p < .05$

Social Validity

To address research question 4, *do teachers, students, and parents find Strong Start to be a socially valid intervention*, social validity questionnaires were provided to educators, students and parents at the end of the *Strong Start* intervention. All participating teachers and the counselor from School 1 returned completed questionnaires. Table 10 provides information regarding the extent to which educators endorsed (agreed or strongly agreed) items or did not endorse (neutral, disagree, or strongly disagree) items. In general, educators endorsed items. One educator was neutral

when asked whether the materials needed for *Strong Start* were easy to access. Another disagreed when asked whether she had adequate time to teach *Strong Start* lessons.

Table 10

Social Validity Results Across Educators

Item	Endorsed	Not Endorsed
1. My students liked *Strong Start.*	100%	0%
2. I feel my students learned important skills From *Strong Start.*	100%	0%
3. I feel my students use the skills learned from *Strong Start.*	100%	0%
4. I enjoyed teaching *Strong Start.*	100%	0%
5. I found *Strong Start* easy to teach.	100%	0%
6. I had adequate time to teach *Strong Start.*	80%	20%
7. The materials needed were easy to access.	80%	20%
8. I felt the training provided prior to *Strong Start* was adequate.	100%	0%
9. I would like to teach *Strong Start* again.	100%	0%
10. I would recommend *Strong Start* to others.	100%	0%

All students completed brief social validity questionnaires at the end of the posttest assessment period. Of the 84 students surveyed, 78% of students reported that they liked *Strong Start* and 68% of students reported they learned a lot during lessons. Eleven parent social validity questionnaires were completed and returned. Table 11 provides

information regarding the extent to which educators endorsed (agreed or strongly agreed) items or did not endorse (neutral, disagree, or strongly disagree) items. Again, parents generally endorsed most items. Four parents reported that they were neutral when asked whether they have tried the tips provided in parent newsletters. Two parents reported as neutral when asked whether their children liked *Strong Start.* Two parents endorsed neutral when asked whether they felt their children learned from *Strong Start,* and one parent was neutral when asked whether his/her child uses the skills learned in the curriculum. One parent returned an incomplete questionnaire with the message, "Sorry, I don't remember what *Strong Start* is, but I am sure it is great."

Table 11

Social Validity Results Across Parents

Item	Endorsed	Did Not Endorse
1. I was aware of what my child was learning	100%	0%
Weekly during *Strong Start* lessons	82%	18%
2. My child liked *Strong Start.*	82%	18%
3. I feel my child learned important skills from *Strong Start.*	82%	18%
4. I feel my child uses the skills learned from *Strong Start.*	91%	9%
5. I think the parent newsletters provide helpful tips.	100%	0%
6. I have tried the tips provided in parent newsletters.	64%	36%

Correlations Across Measures

To address research question 5, *to what extent is student performance on an assessment of social and emotional knowledge skills correlated with teacher report of social behavior and affect,* bivariate correlations were conducted for each assessment wave. Tables 12 through 14 depict this data. Across all three assessment periods the *Content Knowledge* measure was not significantly correlated with either the *Peer Relations* or the *Problem Behavior* scales. The *ACES* did not consistently correlate with either the *Peer Relations* or *Problem Behavior* scales. The *Peer Relations* and the *Problem Behavior* scales were consistently related with moderate, inverse correlations.

Table 12

Intercorrelations at Pretest 1

Variable	Content Knowledge	ACES	Peer Relations	Problem Behavior
Content Knowledge	--			
ACES	.31**	---		
Peer Relations	.06	.23*	---	
Problem Behavior	-.03	-.04	-.46**	---

*p < .05

Table 13

Intercorrelations at Pretest 2

Variable	Content Knowledge	ACES	Peer Relations	Problem Behavior
Content Knowledge	---			
ACES	.03	---		
Peer Relations	.16	.19	---	
Problem Behavior	-.06	-.27*	-63**	---

*p < .05

Table 14

Intercorrelations at Posttest

Variable	Content Knowledge	ACES	Peer Relations	Problem Behavior
Content Knowledge	---			
ACES	.30**	---		
Peer Relations	.21	.03	---	
Problem Behavior	-.15	-.16	-.70**	---

*p < .05

CHAPTER V

DISCUSSION

According to Rounsaville, Carroll, and Onken (2001), research on newly-developed behavioral therapies should occur across three primary stages. The focus of Stage I research should be on assessing the feasibility of implementation and on gathering preliminary efficacy information. Stage II emphasizes large-scale randomized control trials that will ensure the efficacy of treatment while Stage III highlights issues related to external validity, cost-benefit analyses, etc.

The current study on the implementation of *Strong Start* can be considered a Stage I study according to the research framework outlined by Rounsaville et al. (2001). During such preliminary studies, investigators work to conceptualize and produce manuals, identify procedures for implementation of the therapy, target populations for treatment and hypothesize about specific mechanisms of behavioral change. The following discussion will summarize the findings of the current pilot study within the framework of Stage I research.

Summary of Implementation and Feasibility

Treatment Integrity. One primary purpose of the current study was to develop a better understanding of how professionals might best implement a brief social-emotional learning curriculum within the context of heavily-scheduled primary grade classrooms. In both schools, it was determined that it would be most feasible to implement lessons

during the weekly 30-minute period when the school counselors were scheduled to visit the four classrooms. In School 1, the counselor implemented the direct teaching component of each lesson while in School 2 the teacher was the interventionist. Overall, both the counselor and the teacher implemented lessons with a high degree of fidelity. Both interventionists also were observed providing students with multiple opportunities to engage with the curriculum and students responded on topic frequently. Both interventionists were also observed providing more praise than reprimands on average. The counselor tended to provide more opportunities for students to share ideas and her students tended to share more frequently.

Infusion of Skills. All teachers were expected to report to the researcher weekly on whether or not books from the *Strong Start* literature list were read and how often and in what contexts they prompted students to use skills learned during *Strong Start* lessons. Teachers ranged in responsiveness to emails. According to emails, all teachers appeared to consistently read books from the literature list to students. On average, teachers of Class 2 and Class 4 prompted students to use *Strong Start* skills more often. Anecdotally, these teachers also verbalized to the researcher that they had several students with challenging behaviors in their classes. Overall, teachers tended to prompt students less than one time per day and tended to prompt students during conflict situations or when children showed that they were upset.

Acceptability. According to measures of social validity, teachers, the counselor, parents and children found *Strong Start* to be an acceptable intervention overall. The teachers and counselor felt that their students learned, that their students used skills learned, that they felt adequately trained and that they would use *Strong Start* again. One

teacher felt that the books from the literature list were sometimes hard to access and the teacher in School 2 reported that she often ran out of time when teaching lessons. Students overall endorsed that they liked and learned from *Strong Start.* Parent response was relatively limited, but all of those who responded reported that they were aware of *Strong Start* and that they found parent newsletters helpful. Fewer parents endorsed that they tried the tips provided in newsletters.

Summary of Behavioral Change

Research Design. Another primary purpose of the current study was to identify how *Strong Start* might impact students' social and emotional knowledge and their social behavior and affect. To help identify the specific mechanism of change, a within-subjects repeated measures design was employed. Two waves of pretest assessments occurred 13 weeks apart in order to identify changes in assessment scores that might reflect typical maturation for first graders. The intervention was implemented and posttest assessments were given 15 weeks following the second pretest. Comparing scores obtained during the pretest phase and intervention phase enabled the researcher to hypothesize about changes in knowledge and social behavior and affect due to exposure to the *Strong Start* curriculum versus those due to typical maturation alone.

Findings. According to the results of the *Assessment of Children's Emotion Skills (ACES)*, students on average showed lower scores at Pretest 2 than at Pretest 1. Their scores increased significantly between Pretest 2 and Posttest and a moderate effect size was observed. In addition, the change in scores between pretest periods and the intervention period was statistically significant. These results indicate that exposure to

Strong Start may have contributed to increased knowledge in accurately matching emotions to varied situations.

According to the *Problem Behavior* measure taken from the *Social Skills Rating System*, on average students showed a statistically significant increase in problem behavior between Pretest 1 and Pretest 2. A decrease in mean scores between Pretest 2 and Posttest was observed, but these were not found to be significantly different statistically. The small effect size observed may be meaningful, however, given that the primary aim of *Strong Start* is prevention and large, immediate changes in behavior may not be intended (Wilson, Gottfredson, & Najaka, 2001). Change in scores between pretest periods and the intervention period was found to be statistically significant. Furthermore, when this trend in means was examined by type of behavior, internalizing versus externalizing, it was found that internalizing behaviors decreased during the intervention period while externalizing behaviors remained the same. When students who showed no problem behavior during the school year were eliminated from the analysis, it was additionally found that a statistically significant proportion of students with problem behavior showed an increase during the pretest period and a decrease during the intervention period. These analyses support the idea that *Strong Start* may have contributed to a small, but meaningful decrease in problem behavior, particularly internalizing behaviors. Furthermore, *Strong Start* may be providing an intervention effect for students who already display some problem behavior versus those who do not.

The *Strong Start Content Knowledge* measure is an experimental measure aiming to assess student knowledge of the concepts presented in the curriculum. A "ceiling effect" occurred, where students received high scores right at Pretest 1, making it so there

was little room for growth post intervention. Analyses of change scores revealed that there was likely no difference between the change in scores during the pretest periods and intervention period, even though scores increased slightly with each testing period.

The *Peer Relations* measure also showed increases in mean scores across each testing period, however, the change in scores between pretest periods and posttest was not significantly different from one another. In fact, the difference in scores between Pretest 1 and Pretest 2 was greater than the difference between Pretest 2 and Posttest.

Limitations

Design. Although the current study was designed to measure within-subjects change (an appropriate design for a feasibility study) there are some limitations to the design as it was implemented. Given that the study essentially spanned an entire school year and it was designed to measure typical maturation versus "learning" as a result of curriculum implementation, it was difficult to feasibly stagger waves of assessment/implementation across classrooms. If staggering had been feasible, it could have helped to identify what maturation versus intervention outcome looks like in general across a school year versus what maturation looks like from October to January when the two pretests were conducted for all participants. Another option would have also been to employ a true experimental design which would have involved obtaining a larger sample and randomly assigning classrooms to intervention or control. A control group could have provided another opportunity to observe typical maturation versus the impact of the intervention. In this case hierarchical linear modeling may have helped to control for the statistical bias that can occur when participants are nested within classrooms and schools (Raudenbush & Byrk, 1986).

Selection. Another potential threat to the validity of the current study involves the selection of participants. Although all schools involved were from the same school district and have school-wide Positive Behavior Support programs in place, the demographics of student participants varied dramatically by school. For example, one school had a higher percentage of English language learners than the other. Given that the curriculum was only delivered in English, students with limited English proficiency may have been at a disadvantage. Furthermore, although teacher participants were nominated by building principals and asserted that they were committed to implementing the intervention, the school counselor did complete the direct teaching of lessons for three of the four classrooms. Though treatment integrity for both the school counselor and the teacher who did implement *Strong Start* was comparably high, there may have been nuanced differences in their delivery and facilitation of lessons.

History. Administrators and educators agreed not to implement any other universal social-behavioral interventions during the course of *Strong Start* implementation. In theory, this would help to limit competing interventions that might serve as a confounding variable; however, there remains a distinct possibility that other secondary or tertiary social-behavioral supports could have impacted student growth. For example, students that displayed more problem behavior seemed to benefit more from the *Strong Start* intervention, and yet, these same students could have simultaneously been benefiting from individualized behavior support plans, family therapy, etc.

Testing and Measurement. Several limitations to the current study involve issues of testing and measurement. Students and teachers were involved in three waves of assessment across the school year. Though relatively long periods of time elapsed

between testing periods, students' scores could have been impacted, (particularly with the continuous improvement observed on the *Content Knowledge* measure), by general practice with the measure itself. Furthermore, student scores could also have been impacted by the procedural format through which testing occurred. Given the resources available, (e.g. time, graduate student availability, etc), students were tested in small groups. Though every effort was made to ensure that students looked at their own papers, they were seated at small tables and may have been able to share answers with one another.

Teachers provided input using indirect ratings of student behavior and their own behavior regarding their infusion of *Strong Start* skills throughout the week. These ratings essentially measured teacher perceptions of behavior at particular points in time, but teacher perceptions could have differed from behavioral reality. For example, it is possible that teachers tended to perceive and rate the behaviors of individual children as generally "positive" or "negative" across the different points in the year based on their initial impressions of the children at the start of the year. This may have been reflected in the reported increase and stability of externalizing behaviors over time. On the other hand, teachers may have also reported in a socially desirable way given that they knew the objective of *Strong Start* was to teach students about feelings and coping strategies found to be generally effective for internalizing symptoms. In this way, the ratings may not have objectively demonstrated what was actually occurring.

Though the results of this study may provide hints about potential behavioral change mechanisms (e.g. decreased internalizing behaviors, increased knowledge about emotion-laden situations), it is also necessary to question the measures used given the

variability and limited correlations found across assessment waves between measures. Measures of *Peer Relations* and *Problem Behavior* demonstrated consistent internal consistency and were correlated with one another over time. The measures of emotion knowledge, *Strong Start Content Knowledge* and *ACES*, were not consistently correlated with one another or with teacher-rated behaviors. The *Content Knowledge* assessment aimed to measure student knowledge of particular skills included in *Strong Start*. Given that students scored relatively high on this measure with the first pretest, indicates that the measure may not exactly be tapping what the intervention does, it requires more questions that are more complex, or the intervention itself may be more developmentally appropriate for younger students or students with more social-emotional skill deficits.

It may also be useful to examine how reliably young students perform on brief social-emotional knowledge measures such as the *ACES* over a shorter window of time (e.g. gathering test-retest data) and to better examine the validity of such instruments in general. Denham (2006) suggests that there are some technically sound direct measures of emotion knowledge and emotion regulation available for preschool populations; however, most are resource intensive and require children to be individually assessed. Denham calls for further research and assessment development that addresses more advanced emotion knowledge skills, considers behavioral outcomes that may be linked to emotion knowledge and emotion regulation, and considers the role that context might play in assessment of emotion regulation and behavioral responses. The 30-item *Emotion Knowledge Questionnaire*, developed by Ribordy, Camras, Stefani, and Spaccarelli (1988), was validated for use with children five and six years old and may be another option for use in future research projects. The current study was limited by the dearth of

technically sound, developmentally appropriate, and feasibly administered direct measures of emotion knowledge for children in primary grades.

Future Research

According to the stage model of intervention research delineated by Rounsaville et al. (2001), the current study was able to gather some appropriate preliminary information necessary in Stage I research. The educators, parents, and students involved in this study found *Strong Start* to be a useful and acceptable intervention. Educators were able to implement lessons with fidelity based on measures developed to monitor implementation. A training protocol for those monitoring fidelity was developed and observers were reliable in their observations of teacher and student behaviors during lesson implementation. The current study also helped to elucidate how core features of a curriculum can be flexibly implemented to accommodate the scheduling needs of those involved. Given that school counselors in the district involved in this study all have 30 minutes per week to spend with classes, implementation of curricula such as *Strong Start* might be a very effective use of time.

In spite of the obvious measurement limitations observed in the current study, there are promising glimpses in the realm of behavioral change. Based on data gathered, ratings of internalizing behaviors did decrease following the intervention and a significant percentage of students who displayed any problem behavior over the course of the year according to teacher report showed a decrease in such behavior following the intervention. These results are consistent with the findings from a recent study on *Strong Start* conducted with second grade students by Calderella, Christensen, Kramer, and Kronmiller (in press). In this study including one treatment and control classroom,

Calderella et al. found that on average students in the treatment group showed a statistically significant difference in internalizing symptoms as measured by the *SSRS* when compared to peers in the control condition. Peers in the control condition showed an increase in such symptoms while those in the treatment condition showed a decrease following *Strong Start* implementation. Within group *t*-tests for dependent means were used to measure within subject change for members of the treatment group whose problem behavior scores on the SSRS fell within the highest 20% of the class at pretest. Following *Strong Start* implementation, these students showed statistically significant decreases in internalizing symptoms and no change in externalizing symptoms.

Given the initial promise gleaned from the current study, future research is needed on the systematic implementation of *Strong Start*, a brief, social-emotional learning curriculum for young children. The brevity (10 lessons) of this curriculum should be considered as advantageous if lessons are implemented well and if practice of skills taught is prompted and reinforced over the course of the day in a variety of settings. To ensure generalization of skills is appropriately facilitated, future research should include more intensive training and consultation for educators on how to consistently prompt use of skills. Along this vein, more reliable methods for assessing educators' integration of social-emotional skill practice should be generated. Future research could also include a better model for informing parents about the *Strong Start* curricula. For example, if educators shared an overview of the curriculum and the importance of parent newsletters at "open house" or "curriculum night" at schools, parents may be more aware of its purpose and may be more likely to read and even practice tips provided in newsletters.

The current study included several measurement challenges that should certainly be considered in future research. To better pinpoint specific mechanisms of behavioral change that may result from implementation of *Strong Start*, a combination of indirect and direct measurement should be used. Indirect measures might include teacher and parent ratings of both students' social and emotional assets and limitations (Merrell, in press). Direct measurement may even involve targeting specific behaviors associated with emotion regulation (e.g. using appropriate words to express frustration, generating a prosocial solution to a problem) and developing a system of direct observation to code frequency of such behaviors over time. Future research may also include development and validation of brief, developmentally appropriate emotion knowledge measures for elementary school students.

Finally, future research on *Strong Start* should involve examination of its use with a variety of populations. The current study included first grade classrooms. This curriculum is intended for students in kindergarten through second grade. Future studies should include these grade levels. The current study also suggested an intervention effect for students already displaying some type of problem behavior. Future studies should further examine this population and should also examine the potential preventative impact *Strong Start* may have on general populations over time.

In sum, the current investigation of the impact of *Strong Start* on first grade students resulted in meaningful information that is worth future study. A great deal was learned about feasible implementation, acceptability, and potential behavioral impact. Prior to moving toward Stage II research, next steps in Stage I research should work to replicate and further refine how *Strong Start* is used and observed.

APPENDIX A

PARENT CONSENT

EDUCATOR CONSENT

STUDENT ASSENT

Strong Start Parent/Guardian Consent

Dear Parents/Guardians:

My name is Sara Whitcomb and I am a graduate student in the school psychology program at the University of Oregon. During the 2007-2008 school year, I am planning on conducting a research study with first grade students. I have helped to develop a curriculum, *Strong Start,* which aims to help young children learn about identifying and handling emotions and basic problem-solving with peers. *Strong Start* includes 10 forty-minute, activity-based lessons that are easy to implement with children in the primary grades. Games/songs/activities, parent/guardian newsletters and relevant examples of children's literature are included with each lesson. Each lesson also includes "Henry," a bear that helps to communicate the specific content. Your child's teacher has agreed to teach *Strong Start* lessons in her class this year. The purpose of my research study is to better understand if *Strong Start* helps to increase children's knowledge of emotions and social skills. I am also interested in learning if teachers, parents/guardians, and children find *Strong Start* lessons to be worthwhile and enjoyable.

There are several assessments that will help me to achieve the purposes set forth in this study. There are two assessments that I would like to try out with the first graders in your child's class. Each assessment will take about 10 minutes to complete. Both require students to circle answers to questions that ask about identifying emotions and handling social situations. Assessment items appear in both a written and picture format. Graduate students from the University of Oregon will be reading the questions aloud to small groups of children in the classroom while others are working on typical daily classroom activities. These assessments will be given at three different times during the study. The assessments are intended to be fun, but your child's participation is voluntary. Children are not required to participate and will not be penalized in any way if they do not participate. As both assessments and *Strong Start* lessons encourage children to think generally about their feelings and friendships, students could potentially experience feelings of discomfort, such as stress or embarrassment. If completing the assessments or lessons is upsetting to your child in any way, he/she can stop answering the questions and can talk to his/her teacher or me. I will not be asking children to write any identifying information on their papers other than a subject code number. I will have a class list with corresponding code numbers during each assessment period. Once all of the assessments have been completed, I will destroy the class list. At that point, code numbers will make it so that I cannot link any data collected back to individual children. All children in participating classrooms will celebrate the end of this project with an ice cream or pizza party with their classmates.

I will also be asking your child's teacher to rate each individual student's general affect and social behavior at three different points in time. This assessment will consist of 25 statements about peer relationship skills and social behaviors that are problematic.

Teachers will rate each child's behavior on a scale. For example, on some items Teacher will circle "1" if the behavior never happens, a "2," "3," or "4" if the behavior sometimes happens, and "5" if the behavior frequently happens). Again your child's code number will be used so as to maintain his/her confidentiality.

Finally, I will be asking teachers, children, and parent/guardians to rate their experience with the *Strong Start* program upon its completion. Teachers and children will be directly in contact with the lessons each week and can provide important information about whether or not *Strong Start* should be used in the future. Given that parents/guardians will receive weekly newsletters that tell about the lessons; their feedback is just as important. Reading the newsletters should take you no more than 5 minutes per week, and completing the evaluation of *Strong Start* will likely take about 10 minutes.

Your child's participation and your assistance in this project will help to inform use of effective and efficient instructional and assessment procedures for future use of *Strong Start,* a tool developed to enhance the mental health and social competence of young children**.** If you are interested in looking at the types of questions being asked or lessons being delivered in this project, I will leave copies of the assessments and curriculum with your child's teacher. If you have further questions about this project, please contact me at swhitcom@uoregon.edu/ 206-8714 or my advisor, Dr. Kenneth Merrell at kmerrell@uoregon.edu/346-2414. If you have questions about your child's rights as a research participant, please contact the Office for Protection of Human Subjects at the University of Oregon at 346-2510.

If you **are not** willing to allow your child to participate in completing the assessments described above, please sign your name on the line below and return this letter to your child's teacher by _____. Please keep a copy of this **letter** for your own records. *Your signature indicates that you have read and understand the information provided above, that you **decline consent** to participate without penalty, that you have received a copy of this form, and that you are not waiving any legal claims, rights, or remedies.*

Thank you for helping me to move forward with my research project.

Sincerely,

Sara Whitcomb

I DO NOT give consent for my child (name)_____ to participate in this study

Please print your child's name:_____
Please print parent/guardian name: _____
Parent/guardian signature: _____

Comienzo Fuerte, Consentimiento/Permiso del Padre Familiar/Tutor

Estimados Padres/Tutores:

Mi nombre es Sara Whitcomb y soy una estudiante graduada del programa de psicología escolar en la Universidad de Oregon. Durante el año escolar 2007-2008, planeo iniciar un estudio de investigación con los estudiantes del primer grado escolar. He ayudado a desarrollar el curriculo (o plan de estudios) llamado *Comienzo Fuerte,* lo cual se enfoca a ayudar a los jovencitos a aprender como identificar y manejar emociones y como resolver problemas básicos con compañeros. *Comienzo Fuerte* incluye 10 turnos de cuarenta y cinco minutos, en actividades basadas en lecciones que son fáciles de implementar a niños en los grados primarios. Juegos/canciones/actividades, cartas a padres familiares/tutores y ejemplos relevantes de la literature de los niños son incluidos con cada lección. Cada lección también incluye "Henry," un oso que ayuda a comunicar el contenido específico. El maestro de su hijo/a ha estado de acuerdo en enseñar lecciones de *Comienzo Fuerte* en su salón de clases este año. El propósito de mi investigación de estudios es para entender mejor si el programa *Comienzo Fuerte* ayuda a aumentar el conocimiento de los niños en las emociones y habilidades sociales. También, estoy interesada en aprender si los maestros/as, padres de familia/tutores, y los niños encuentran las lecciones de *Comienzo Fuerte* interesantes y agradables.

Hay varias evaluaciones que me ayudarán a lograr los propósitos hechos para este estudio. Hay dos evaluaciones que me gustarían intentar con los del primer grado en la clase de su hijo/a. Cada evaluación se tomará aproximadamente 10 minutos para completar. Los dos requieren que los estudiantes circulen sus respuestas que son identificar sus emociones y como manejan sus situaciones sociales. Estas evaluaciones se presentan en formato de dibujo y escritura. Los estudiantes graduados de la Universidad de Oregon estarán leyendo las preguntas en pequeños grupos de niños en la clase, mientras que otros siguen trabajando en sus típicas actividades de clases diarias. Estas evaluaciones serán dadas en tres diferentes tiempos durante el estudio. Las evaluaciones son intentadas a ser divertidas, pero la participación de su hijo/a es voluntaria. Los niños no son requeridos a participar y no serán penalizados de ninguna manera si ellos no participan. Como las dos evaluaciones y las lecciones de *Comienzo Fuerte* animan a los niños en pensar generalmente sobre sus sentimientos y amistades, pueda ser que los estudiantes sientan o experimenten un nivel de incomodidad, tal como estrés, o pena. Si el completar la evaluación o las lecciones es incomodo para su hijo/a en cualquier manera, él/ella puede parar de contestar las preguntas y puede hablar con su maestro/a o yo. No les estaré pidiendo a los niños escribir cualquier imformación identificadora en sus papeles con excepción de un número de código con sujeto. Tendré una lista de clase con los números de código correspondientes durante cada periódo de evaluación. Una vez que todas las evaluaciones hayan sido completadas, yo destruiré la lista de clase. En ese instante los números de código lo harán de modo que yo no pueda relacionar cualquier dato coleccionado de los estudiantes individuales. Todos los niños

participantes de los salones celebrarán el final de este proyecto con nieve o una fiesta de pizza con sus compañeros de clase.

También le pediré al maestro/a de su hijo/a que califique cada afecto general del individuo y comportamiento social en tres puntos diferentes durante ese tiempo. La evaluación consistirá de 25 declaraciones sobre las habilidades de relaciones de los compañeros y comportamientos sociales que son problematicos. Los maestros calificarán el comportamiento de sus hijos/as en una escala (Por ejemplo, en algunos artículos el maestro circulará "1" si el comportamiento nunca paso, un "2," "3," o "4," si el comportamiento algunas veces paso, y un "5," si el comportamiento paso frecuentemente). De nuevo, el número de código de su hijo/a será usado para mantener su confidencialidad. Finalmente, les pediré a los maestros, niños y padres de familia/tutores que califiquen su experiencia con el programa *Comienzo Fuerte* a su final. Los maestros y los niños estarán directamente en contacto con las lecciones cada semana y puede proveer información importante sobre si el programa *Comienzo Fuerte* se deberá usar en el futuro o no. Como dicho, se les enviará a los padres de familia cartas semanales de noticias que les dirá sobre las lecciones, su opinión es tan importante. El leer estas cartas no deberá tomarle ni 5 minutos por semana, y completar la evaluación de *Comienzo Fuerte* le tomarán unos 10 minutos.

La participación de su hijo/a y su asistencia en este proyecto ayudará a informar al uso eficaz y eficiente de los procedimientos educacionales y de la evaluación para el uso futuro del *Comienzo Fuerte*, una herramienta para engrandecer la salud mental y capacidad social de los jovencitos. Si usted está interesado/a en ver los tipos de preguntas que les serán preguntadas a los niños or las lecciones que les enseñarán en este proyecto, dejaré copias de las evaluaciones y el curriculo con el maestro de su hijo/a. Si usted tiene más preguntas sobre este proyecto, por favor comuníquese conmigo a swhitcomb@uoregon.edu / 206-8714 or mi consejero, Dr. Kenneth Merrel a kmerrell@uoregon.edu / 346-2414. Si usted tiene preguntas sobre los derechos de su hijo/a como participante de investigación, por favor contacte a la oficina de "Protection of Human Subjects" en la Universidad de Oregon al 346-2510.

Si usted no permite que su hijo/a participe en completar esta evaluación dicho anteriormente, por favor firme su nombre en la línea de abajo indicada y regrese esta forma al maestro de su hijo/a el _____. Por favor guarde una copia de esta forma de permiso/consentimiento para sus archivo. Su firma indica que usted ha leído y entendido la información dada, que usted no permite que su hijo/a participe en completar esta evaluación, y que no habrá castigo por la falta de consentimiento.

Gracias por ayudarme a seguir con mi proyecto de investigación.

Sinceramente,

Sara Whitcomb

Por favor, escriba el nombre de su hijo/a:

_____

Por favor, escriba el nombre del padre familiar o tutor:

_____

Firma del padre familiar o tutor:

_____

Strong Start Teacher Consent

October 2007

Dear First Grade Teachers:

My name is Sara Whitcomb and I am a graduate student in the school psychology program at the University of Oregon. Next fall, I am planning on conducting a dissertation study with first grade students. I have helped to develop a curriculum, *Strong Start,* which aims to help young children learn about identifying and handling emotions and basic problem-solving with peers. It includes 10 forty-minute, activity-based lessons that are easy to implement with children in the primary grades. The purpose of my research study is to better understand if *Strong Start* helps to increase children's knowledge of emotions and social skills. I am also interested in learning if teachers, parents/guardians, and children find *Strong Start* lessons to be worthwhile and enjoyable.

This fall, I will provide training to you and other first grade teachers who are willing to implement this curriculum during winter and spring and complete brief assessments that measure students' social behavior and affect. Weekly preparation for lessons will take a maximum of 15-20 minutes. The training will require 3-4 hours of your time and can be completed on different days (e.g. weekly grade-level meetings). Assessments will be completed at three points in time and will take approximately 5 minutes per child to complete. Data collectors from the University of Oregon will be trained to observe implementation of 4-5 lessons. Weekly emails assessing your use of *Strong Start* skills over time will also be included and will likely take approximately 5 minutes to complete. I will also be providing you with copies of *Strong Start* parent/guardian newsletters to send home with students. You will be compensated with two, $50 dollar certificates to a bookstore and local restaurant over the course of the study. You will also be provided with your own copy of *Strong Start.*

Given that students in your classroom will be involved in the study, they will also be asked to complete two measures that assess their knowledge of the content at three points in time. Each assessment will take about 10 minutes for students to complete. Graduate students from the University of Oregon will be reading the questions aloud to small groups of children in the classroom while others are working on typical daily classroom activities. Children will celebrate the end of this project with and ice cream or pizza party with their classmates. I will work with you to find an appropriate time for graduate students to come into your class to facilitate assessment administration and ice cream/pizza parties.

Finally at the conclusion of the study, I will be asking you, the children, and parent/guardians to rate their experience with the *Strong Start* program. These

questionnaires will take approximately 5 minutes to complete. I will provide you with copies of the rating forms to send home with students.

The assessments and lessons are intended to be fun, but your participation is voluntary. Your decision to participate will not affect your job, and you will not be evaluated for employment purposes. In order to maintain confidentiality throughout the study, teacher data collected during observations and over email will be marked with a code number and your name will be removed.

In agreeing to participate, you are expressing that you place importance on the social-emotional development of students and are willing to implement social-emotional lessons once per week and participate in the assessment activities. Finally, your participation indicates that you agree to not implement other formal social-emotional curricula during the course of the study.

If you have questions about this project, please contact me at (541) 206-8714 or swhitcom@uoregon.edu.

Sincerely,

Sara Whitcomb, Ed.M.

Your signature indicates that you have read and understand the information provided above, that you willingly agree to participate, that you may withdraw your consent at any time and discontinue participation without penalty, that you have received a copy of this form, and that you are not waiving any legal claims, rights or remedies.

Print Name:_____

Signature:_____

Strong Start Student Assent

Dear Student:

My name is Sara Whitcomb and I am a student at the University of Oregon. I am working on a project that will help me to learn more about how children in elementary school understand feelings and friendship. Soon, your teacher will begin teaching lessons once a week from a book called *Strong Start.* During these 10 lessons, you will be learning with my friend, Henry the bear. He hopes to help you to learn about understanding feelings and being a good friend.

Today, and on two other days several weeks from now, I will also be asking you to circle some answers to questions on two tests. These tests will each take about 10 minutes to complete. Please answer the questions the best you know how. You will not get a grade on these papers and your teacher won't even see them. You do not even need to write your name on these papers. Instead, I am going to give each of you your own number to write on these papers. When I look at these papers later, I will not know who circled the answers. In other words, your answers will be kept secret. If the questions I read make you feel uncomfortable in any way, you can talk to me, your teacher, or your parents about it. You do not have to participate in these activities if you do not want to, and you will not be in trouble if you do not want to participate.

If you choose to participate in these *Strong Start* activities, your class will celebrate with a pizza or ice cream party when the project is over.

If you do want to participate, write your name here:_____

Thank you,

Sara Whitcomb

APPENDIX B

IMPLEMENTATION CHECKLISTS

Implementation Checklist
Lesson 2: Understanding Your Feelings, Part I

Observation start time: _____

Observation end time:_____

Tally of opportunities to respond **Tally of student responses**

Tally of total praise statements **Tally of total reprimands given**

I. Review
Minutes:_____

- □ Referred to previous lesson describing the Feelings Exercise Group

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

II. Introduction
Minutes:_____

- □ Communicates that students will talk about naming feelings.
- □ Communicates that there are feelings that make us feel **good** or **not good** on the inside.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Feelings Identification
Minutes:_____

- □ Communicates that we all have feelings wherever we go.
- □ Generates a list of feelings.
- □ Identifies feelings as those that make us feel **good** and **not good**.

- □ Engages children in practice activity (thumbs up/thumbs down).
- □ Describes that it is hard to determine whether some feelings make us feel **good** or **not good** on the inside.
- □ Encourages students to pay attention to feelings in their bodies, expressions on their faces, and thoughts in their minds that help them name feelings.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

IV. How do you feel?
Minutes:_____

- □ Brainstorms times/situations when we might have certain feelings.
- □ Engages students in Think/Pair/Share activity.
- □ Mentions that students will engage or engages students in drawing activity.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Closure
Minutes:_____

- □ Teacher reviews with students that naming feelings is important.
- □ Teacher reminds students that we have feelings everywhere we go.
- □ Teacher reviews that some feelings make us feel **good** and others make us feel **not good**.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented:_____
Percentage of Components Fully Implemented: _____

Implementation Checklist
Lesson 4: When You're Angry

Observation start time: _____

Tally of opportunities to respond **Tally of student responses**

Tally of total praise statements **Tally of total reprimands given**

I. Review
Minutes:_____

- □ Refers to previous lesson **Understanding Your Feelings.**
- □ Refers to feelings that make us feel **good** and **not good** on the inside.
- □ Refers to **Ok** and **Not Ok** ways of showing feelings.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

II. Introduction
Minutes:_____

- □ Communicates that students will talk about anger.
- □ Communicates that students will learn about what anger looks like and feels like.
- □ Communicates that students will learn about when anger might occur and how they can deal with their anger.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Read a Book from the literature list
Minutes:_____

- □ Teacher reads appropriate book.

- ☐ Teacher engages students in a discussion about feelings characters experienced in the book with a particular emphasis on anger.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Show and Define Anger
Minutes:_____

- ☐ Shows pictures or gives examples of what angry faces look like.
- ☐ Encourages students to share what their bodies feel like when they are angry.
- ☐ Encourages children to share times when they experienced anger.
- ☐ Brainstorms synonyms for anger.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

IV. Ways of Handling Anger
Minutes:_____

- ☐ Introduces **Ways that Help** and **Ways that Hurt** in handling anger.
- ☐ Uses an overhead or visual of Supplement 4.2 to show the **Stop, Count, In, Out** strategy.
- ☐ Provides multiple examples (**Ways that** Help) and non-examples (**Ways that Hurt)** for handling anger.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Activity
Minutes:_____

- ☐ Introduces hands-on activity that children will complete showing **Ways that Help.**

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Closure
Minutes:_____

- ☐ Teacher reviews with students that everyone feels angry sometimes.
- ☐ Teacher reminds students to use **Ways that Help** in handling anger.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented:_____
Percentage of Components Fully Implemented: _____

Implementation Checklist
Lesson 6: When You're Worried

Observation start time: _____

Tally of opportunities to respond **Tally of student responses**

Tally of total praise statements **Tally of total reprimands given**

I. Review
Minutes:_____

- ☐ Refers to previous lesson **When You're Happy.**
- ☐ Refers to **positive (happy) thinking.**

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

II. Introduction
Minutes:_____

- ☐ Communicates that students will talk about feeling worried.
- ☐ Communicates that students will learn about how to deal with worries.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Show and Define Worry
Minutes:_____

- ☐ Shows pictures or gives examples of what worried faces look like.
- ☐ Encourages students to share what their bodies feel like when they are worried.
- ☐ Encourages children to share times when they experienced worry.
- ☐ Brainstorms synonyms for worry.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

IV. Letting Go of Worries
Minutes:_____

- □ Uses the **ABC's of Positive Thinking** and **Stop, Count, In, Out** strategies to explain how to let go of worries.
- □ Provides multiple examples and non-examples for **Letting Go of Worries**.
- □ Engages students in problem-solving how to let go of worries when non-examples are provided.
- □ Engages in relaxation exercise or explains that students will engage in one in the near future.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Closure
Minutes:_____

- □ Teacher reviews with students that everyone feels worried sometimes.
- □ Teacher reminds students to use **ABC's of Positive Thinking** and **Stop, Count, In, Out** strategies to let go of worries.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented:_____
Percentage of Components Fully Implemented: _____

Lesson 7: Understanding Other People's Feelings

Observation start time: _____

Tally of opportunities to respond **Tally of student responses**

Tally of total praise statements **Tally of total reprimands given**

I. Review
Minutes: _____

- ☐ Refers to previous lesson **When You're Worried.**
- ☐ Reviews ABCs of Positive Thinking, and the Stop, Count, In, Out strategy.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

II. Introduction
Minutes:_____

- ☐ Communicates that students will talk about understanding how other people feel.
- ☐ Communicates that students will learn to notice what other people's bodies and faces look like when they are feeling different ways.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Name and Define Skill / Modeling / Charades
Minutes: _____

- ☐ Explains how to tell other's feelings by looking for visual cues of face and body.
- ☐ Shows faces from supplement 7.1, identifies visual cues.
- ☐ Models body clues for various emotions.
- ☐ Has students act out feelings for each other.
- ☐ Points out how understanding others' feelings helps us get along better.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

IV. Read a Book from Literature List
Minutes:_____
Book Title/Author: _____

- □ Identifies characters' feelings and behaviors.
- □ Notes how different characters have different feelings in same situation.
- □ Uses relevant questions to guide discussion.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Real World Examples
Minutes:_____

- □ Reviews how same experience can lead to different feelings in different people.
- □ Provides examples of when this might occur.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

VI. Closure
Minutes: _____

- □ Reviews ways to tell how others are feeling.
- □ Explains how to look for visual cues.
- □ Reminds students that others may have different feelings and understanding them helps to be good friends.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented: _____
Percentage of Components Fully Implemented: _____

Implementation Checklist
Lesson 8: Being a Good Friend

Observation start time: _____

Tally of opportunities to respond **Tally of student responses**

Tally of total praise statements **Tally of total reprimands given**

I. Review
Minutes:_____

- □ Refers to previous lesson **Understanding Other People's Feelings.**
- □ Reviews body clues that tell us how others are feeling

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

II. Introduction
Minutes:_____

- □ Communicates that students will talk about being good friends.
- □ Communicates that students will learn about how to show how to be a good friend with their bodies.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

III. Talking and Listening
Minutes:_____

- □ Encourages students to use a nice voice (soft and gentle) when talking to friends.
- □ Encourages students to use their eyes, ears, and bodies to show that they are listening to friends.
- □ Models examples of using a nice voice and being a good listener.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

IV. Approaching Others
Minutes:_____

- □ Explains how to begin a friendship or activity with friends.
- □ Brainstorms list of ways to show others you want to be a friend.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

V. Sharing and working together/Activity
Minutes:_____

- □ Explains that good friends share and work together.
- □ Encourages students to think of a time when they have shared or worked together.
- □ Engages students in making a class book based on Supplement 8.1 or explains this as an activity that will be completed later.

Circle One: Not Implemented Partially Implemented Fully Implemented
Notes: _____

- □ Reviews concepts relating to being a good friend (e.g. using nice voices, listening ears, kind words.
- □ Reviews that being a good friend makes it easier to work together and share.

VI. Closure
Minutes:_____

Observation finish time: _____

Percentage of Components Not Implemented: _____
Percentage of Components Partially Implemented:_____
Percentage of Components Fully Implemented: _____

APPENDIX C

BEHAVIORAL DEFINITIONS FOR TEACHER AND STUDENT BEHAVIOR

Definitions for Observations of Strong Start (Adapted from Martin & Rao, in preparation)

Opportunities to Respond (OTR): A *specific instructional* question, statement or gesture made by the teacher that seeks a *verbal* or *behavioral response* from an individual or the group

- **Examples:**
  - "Raise your hand if you have ever felt mad before."
  - "Who can tell me if this is an OK or NOT OK way to handle a feeling?"
  - "Give me a thumbs-up if you think this is a good feeling."
  - "Have you ever felt mad before? What did your body look like when you were mad?"
  - "Tell the person next to you about a time when you felt surprised."
- **Non-examples:**
  - Non-specific questions such as "Do you understand?"
  - Behavioral directions such as "Please sit down in a circle."
  - Non-instructional questions such as "Remember Henry?"
  - "Pull out a pencil."

Relevant Student Responses: An *oral or behavioral* response provided by a student or group of students related to an OTR.

- **Examples:**
  - Children in the class raise hands when asked if they have felt mad.

- "That is an OK way to handle a feeling."
- Children give thumbs-up sign as an answer to teacher's OTR.
- Teacher directs children to get into pairs and share. ~80% or more of the class comply with teacher request.
- Child responds accurately without being called upon and response is followed by a reprimand such as "Please don't call out. I am looking for raised hands."

- **Non-examples:**
  - Teacher asks "Tell me how your body felt when you were mad." Child responds "I was mad when my sister wouldn't share."

Teacher praise: will be defined as an *evaluative* (qualitative) statement made by the teacher that indicates approval of desired behavior or response/performance. The interaction indicates approval based on the behavior of the student at the time the teacher attends to him or her, not the tone of the interaction. *Praise statements must include an evaluative component (i.e. good, great, nice, etc)*

Reprimand/ Correction: Verbal comments made by the teacher indicating *disapproval* of student *behavior*. The interaction indicates disapproval based on the behavior of the student(s) at the time the teacher attends to him or her, not the tone of the interaction. *Examples may include statements such as no, please stop, don't, etc. or may include explicit behavioral redirection such as "please keep your feet on the floor."*

APPENDIX D

CONTENT KNOWLEDGE MEASURE

Strong Start
Content Knowledge Assessment
Directions for Administration

Read the following script aloud to students:

Today I am going to ask you to listen carefully as I read directions for 18 items on these two pieces of paper. I will ask you to circle pictures or put "x" marks on pictures or next to words. I will read one item at a time. When you are done marking an answer, please put your pencil down and look up at me so that I know you are ready. Please work quietly and do not say your answers out loud. Remember, if you do not know an answer, that is ok. Just take your best guess. Are there any questions?...Please put your finger on number 1 and look at me. (Help any child who cannot find number 1). *Let's begin.*

Read aloud assessment items.

Strong Start
Content Knowledge Assessment

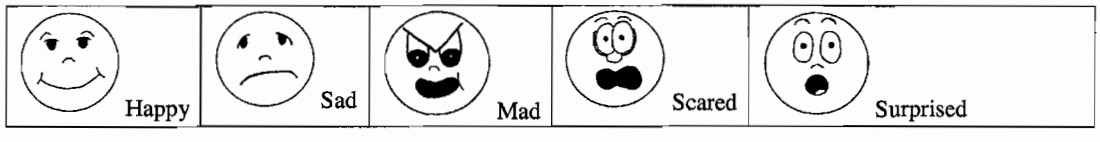
1) Circle the happy face.			
2) Circle the angry face.			
3) Circle the surprised face.			
4) Circle the disgusted face.			
5) Circle the afraid face.			
6) Circle the sad face.			

7) Circle the feeling that makes you feel **not good** on the inside.


8) How do you feel when you are asked to eat something you **don't** like?


9) Put an **X** on the picture showing a **way that hurts**.
Circle the **way that helps**.


10) Henry was lying in bed and heard a loud noise. Circle the faces that show the feelings that he might have.



11) Last week Henry did not do well on his spelling test. This week he is so worried about the test on Friday that he can't sleep, he has a stomach ache, and can't stop thinking about the test. Is he Letting Go or Not Letting Go of his worries?

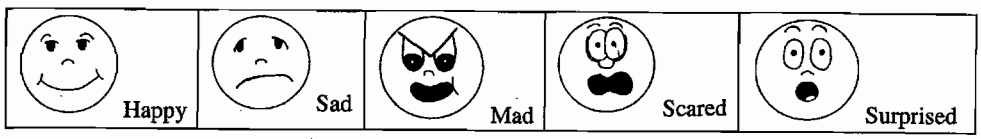
Mark the right box.

☐ He is Letting Go.

☐ He is Not Letting Go.

12) 

Look at this boy and use body clues to tell how he is feeling. Circle one feeling.



13)

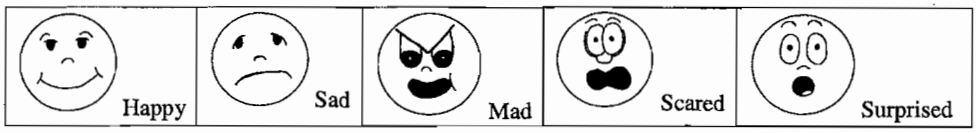
Last year, Henry's family moved and Henry went to a new school. He did not know any of the kids in his new class. During indoor recess, Henry wanted to join two kids playing legos but he did not know how. He did not ask if he could play, but he tipped over a lego tower and laughed. Was Henry using an ***OK*** or ***NOT OK*** way to join the game?

☐ ***OK***

☐ ***NOT OK***

14)

When Henry tipped over the Lego tower, how do you think the kids who were playing with them felt? Circle the feelings.



15)

When Henry tipped over the Lego tower, the kids who were playing both counted to 10 and took a deep breath. They asked Henry to help pick it up. Henry helped and asked if he could play. Were they ***Problem-Solving*** or ***Not Problem-Solving?***

□ ***Problem-Solving***

□ ***Not Problem-Solving***

16) Henry felt disgusted when she saw her friend sneeze all over the lunch table. He got up and said "Ewwwwwwww!" very loudly. Was this an ***OK*** or ***NOT OK*** way to handle his feelings?

□ ***OK***

□ ***NOT OK***

17) Henry was worried about meeting his new teacher on the first day of school. He let his teacher know how he was feeling. Was this an ***OK*** or ***NOT OK*** way to handle his feelings?

□ ***OK***

□ ***NOT OK***

18) Henry felt angry when his friend did not want to share a toy. Henry took the toy and played with it when his friend was not looking. Was this an ***OK*** or ***NOT OK*** way to handle his feelings?

□ ***OK***

□ ***NOT OK***

APPENDIX E

ASSESSMENT OF CHILDREN'S EMOTION SKILLS (ACES)

Assessment of Children=s Emotion Skills (ACES): SITUATIONS

Subject _____

I=m going to tell you about some kids your age, and I want you to tell me if you think they would feel happy, sad, mad, or scared. Sometimes you might think they feel two emotions, like both mad and sad. If so, I want you to pick the feeling you think they would have more strongly. Sometimes they may not feel any emotion strongly, and you can tell me that by saying, "no feeling." Don't say "no feeling" just because you're not sure how they would feel, though. If you think they would feel anything, I want you to take a guess at what it is, okay?

1. Tim=s parents told him that they would take him to the fair. When it is time to go, his parents say that none of them can go. Do you think Tim feels happy, sad, mad, scared, or no feeling?

2. Kelly just finished coloring a picture. You tell her that it looks Anice.@ Do you think Kelly feels happy, sad, mad, scared, or no feeling?

3. Jasmine took care of her kitten, which she loved very much. One day the kitten disappeared and never came back. Do you think Jasmine feels happy, sad, mad, scared, or no feeling?

4. Juan walks down the hall. A big kid walks right at Juan and tells him to get out of the way. Do you think Juan feels happy, sad, mad, scared, or no feeling?

5. Melissa is building a big tower of blocks. Another kid comes over and knocks it over and laughs. Do you think Melissa feels happy, sad, mad, scared, or no feeling?

6. Scott lets Ryan play with his favorite toy. Ryan plays with the toy, and it breaks. Do you think Scott feels happy, sad, mad, scared, or no feeling?

7. Lonnie is in line for lunch. Darren steps in front of him without asking. Do you think Lonnie feels happy, sad, mad, scared, or no feeling?

8. Sarah was riding her bike. She went down a big hill and started going faster than she wanted. Do you think Sarah feels happy, sad, mad, scared, or no feeling?

9. Alex made a nice card for his friend Josh. Josh likes the card a lot. Do you think Alex feels happy, sad, mad, scared, or no feeling?

10. Mary=s grandfather died. Do you think Mary feels happy, sad, mad, scared, or no feeling?

11. Adrian=s parents are having a fight in the bedroom. He can hear them yelling. Do you think Adrian feels happy, sad, mad, scared, or no feeling?

12. Brian was at the park, and his mother bought him an ice cream cone. Brian took one lick and then accidentally dropped the ice cream cone. Do you think Brian feels happy, sad, mad, scared, or no feeling?

13. James brings his favorite candy bar to school in his book bag. A boy sees the candy bar, takes it, and eats it. Do you think James feels happy, sad, mad, scared, or no feeling?

14. Michael is playing in the woods with Andy. Andy runs away and leaves Michael alone in the woods. It=s getting dark. Do you think Michael feels happy, sad, mad, scared, or no feeling?

15. It is the first day of school. Your friend Maria hasn=t seen you all summer. She sees you in class. Do you think Maria feels happy, sad, mad, scared, or no feeling?

Assessment of Children's Emotion Skills (ACES): Situations
Subject:_____ Pre:_____ Pre:2_____ Post:_____

Boy:____ Girl:_____


Happy

Sad

Mad

Scared
No Feeling

2.

Happy

Sad

Mad

Scared
No Feeling

3.

Happy

Sad

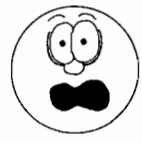
Mad

Scared
No Feeling

4.

Happy

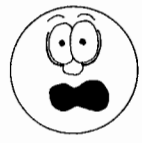
Sad

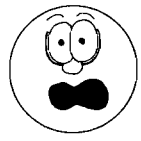
Mad

Scared
No Feeling

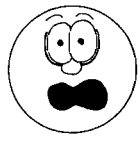
5.

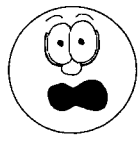
Happy

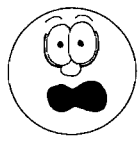
Sad

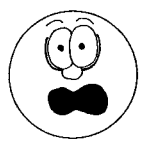
Mad

Scared
No Feeling

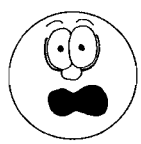
6.  Happy  Sad  Mad  Scared No Feeling

7.  Happy  Sad  Mad  Scared No Feeling

8.  Happy  Sad  Mad  Scared No Feeling

9.  Happy  Sad  Mad  Scared No Feeling

10  Happy  Sad  Mad  Scared No Feeling

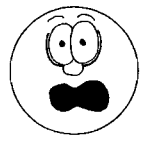
11  Happy  Sad  Mad  Scared No Feeling

12

Happy

Sad

Mad



Scared

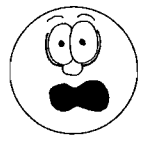
No Feeling

13

Happy

Sad

Mad



Scared

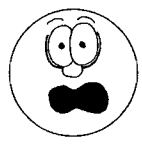
No Feeling

14

Happy

Sad

Mad



Scared

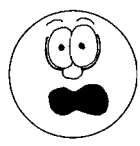
No Feeling

15

Happy

Sad

Mad



Scared

No Feeling

Total Score:_____

APPENDIX F

SCHOOL SOCIAL BEHAVIOR SCALES (PEER RELATIONS)

Student Code Number:_____Classroom_____

Pre-test 1_____ Pre-test 2_____ Pre-test 3_____

School Social Behavior Scales
Kenneth Merrell, 2002

Directions: After you have completed the identifying information section, please rate this student's behavior using all of the items below. Ratings should be based on your observations of this student's behavior **during the past three months.** The rating points after each item are based on the following format:

Never: If the student does not display a particular behavior, or if you have not had the opportunity to observe a particular behavior, circle 1, which indicates *Never.*

Frequently: If the student often exhibits a particular behavior, circle 5, which indicates *Frequently.*

Sometimes: Circle the numbers 2, 3, or 4, (which indicate *Sometimes*) if the student exhibits the behavior somewhere between the two extreme rating points, based on your judgment of how frequently it occurs.

Please complete all items, and do not circle between numbers.

	Never	Sometimes			Frequently
1. Offers help to other students when needed.	1	2	3	4	5
2. Participates effectively in group discussions and activities.	1	2	3	4	5
3. Understands problems and needs of other students.	1	2	3	4	5
4. Invites other students to participate in activities.	1	2	3	4	5
5. Has skills or abilities that are admired by peers.	1	2	3	4	5
6. Interacts with a wide variety of peers.	1	2	3	4	5
7. Is good at initiating or joining conversations with peers.	1	2	3	4	5
8. Is sensitive to feelings of other students.	1	2	3	4	5
9. Enters appropriately into ongoing activities with peers.	1	2	3	4	5
10. Has good leadership skills.	1	2	3	4	5
11. Notices and compliments accomplishments of others.	1	2	3	4	5

12. Is assertive in an appropriate way when he/she needs to be.	1	2	3	4	5
13. Is invited by peers to join in activities.	1	2	3	4	5
14. Is "looked up to" or respected by peers.	1	2	3	4	5

Total Score_____

APPENDIX G

SOCIAL SKILLS RATING SYSTEM (PROBLEM BEHAVIOR)

Social Skills Rating System
Gresham and Elliott, 1990

Directions: This questionnaire is designed to measure how often a student exhibits problem behaviors.

	Never	Sometimes	Very Often
1. Fights with others.	0	1	2
2. Has low self-esteem	0	1	2
3. Threatens or bullies others.	0	1	2
4. Appears lonely.	0	1	2
5. Shows anxiety about being with a group of children.	0	1	2
6. Is easily embarrassed	0	1	2
7. Argues with others.	0	1	2
8. Talks back to adults when corrected.	0	1	2
9. Gets angry easily.	0	1	2
10. Has temper tantrums.	0	1	2
11. Likes to be alone.	0	1	2
12. Acts sad or depressed.	0	1	2

Total Score_____

APPENDIX H

SOCIAL VALIDITY MEASURES

Strong Start
Social Validity Questionnaire/Students

	Yes	**No**	**Kind of**
1) I liked Strong Start.			
2) I learned a lot during Strong Start lessons.			
3) My favorite part about Strong Start was:			

Strong Start
Social Validity Questionnaire
Teachers

Please rate the following questions based on your experience with Strong Start	**1** **Strongly Disagree**	**2** **Disagree**	**3** **Neutral**	**4** **Agree**	**5** **Strongly Agree**
1) My students liked Strong Start.					
2) I feel my students learned important skills from Strong Start.					
3) I feel my students use the skills learned from Strong Start.					
4) I enjoyed teaching Strong Start.					
5) I found Strong Start easy to teach.					
6) I had adequate time to teach Strong Start.					
7) The materials needed for Strong Start were easy to access.					
8) I felt the training provided prior to using Strong Start was adequate.					
9) I would like to teach Strong Start again in the future.					
10) I would recommend Strong Start to other teachers.					

Additional Comments:_____

_____

_____

Dear Parents/Guardians,

Below is a questionnaire about the Strong Start curriculum. Please answer the questions and return to your child's teacher within the next week. Thanks!

Strong Start
Social Validity Questionnaire
Parents/Guardians

Please rate the following questions based on your experience with Strong Start	**1** **Strongly Disagree**	**2** **Disagree**	**3** **Neutral**	**4** **Agree**	**5** **Strongly Agree**
1) I was aware of what my child was learning during weekly Strong Start lessons.					
2) My child liked Strong Start.					
3) I feel my child learned important skills from Strong Start.					
4) I feel my child uses the skills learned from Strong Start.					
5) I think the parent newsletters (Strong Start Bulletin) provide helpful tips for parents/guardians.					
6) I have tried the tips provided in the parent newsletters.					

Additional Comments:_____

_____

_____

Estimados Padres/Guardianes Legales,

Este es un cuestionario sobre el programa/las lecciones de Strong Start. Por favor responda las preguntas y regrese el cuestionario al (a la) maestro(a) durante la próxima semana. ¡Muchas Gracias!

Strong Start
Cuestionario de Validez Social
Padres/Guardianes Legales

Por favor responda las siguientes preguntas en base a su experiencia con Strong Start	**1** Totalmente en Desacuerdo	**2** Desacuerdo	**3** Neutral	**4** De Acuerdo	**5** Totalmente de Acuerdo
1) Yo estaba enterado(a) de lo que mi hijo(a) estaba aprendiendo durante las lecciones semanales de Strong Start.					
2) A mi hijo(a) le gustó el programa de Strong Start.					
3) Siento que mi hijo(a) aprendió destrezas importantes en Strong Start.					
4) Siento que mi hijo(a) usa las destrezas que aprendió en Strong Start.					
5) Pienso que los boletines de Strong Start para los padres ofrecen ideas que ayudan a los padres/guardianes.					
6) Yo he utilizado las ideas que aparecen en los boletines para padres.					

Comentarios Adicionales:_____

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