

Name: \_\_\_\_\_

## Meta-Moment Guided Notes

### Day 1

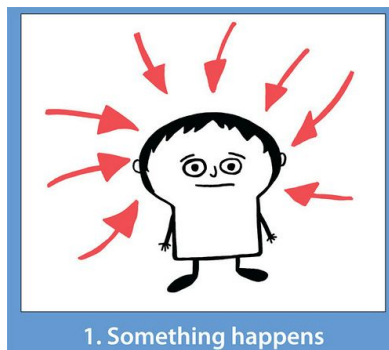
What is a meta-moment? .

---

---

---

#### Step 1: Something Happens



<p>I feel <b>upset</b> when...</p> <hr/> <hr/> <hr/> <hr/>	<p><u>Picture</u></p>
--	-----------------------

## Step 2: Sense

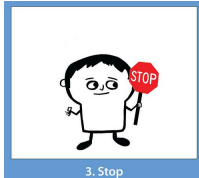
Imagine you are in that situation right now.



<p>What are you thinking?</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>What is your body doing?</p> <hr/> <hr/> <hr/> <hr/> <hr/>	<p>How are you showing your feelings (words, volume, face, etc.)?</p> <hr/> <hr/> <hr/> <hr/> <hr/>
<p><u>Picture:</u></p>	<p><u>Picture:</u></p>	<p><u>Picture:</u></p>

## Day 2

### Step 3: Stop

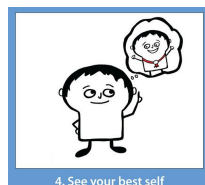


Why does breathing help us stop?

What I look like after I stop & breathe:

## Days 3-4

### Step 4: See Your Best Self



"Best self" means \_\_\_\_\_

Class Brainstorm: What words describe someone who is being their best self in our class? What actions does that person take?

Character traits that define our class best self	Actions that define our class best self

Character traits that define my best self:	Actions that define my best self:

Picture of my best self:

Days 5-7



Step 5: Strategize

Strategy	How it Works	Picture
Add a comment box and plan your exemplars.		

The strategy that will work best for my meta-moment is:

## Day 8



### Step 5: Succeed

What will the outcome be if I use the strategy I chose?

---

---

---

Picture:

# Kimochi Plans TK-2

## January 2016

1/12	1/14
<p><i>RWBAT: recognize mad feelings and practice cooling down strategies</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>	<p><i>RWBAT: review talking vs. fighting voice/ face and practice being assertive to show that they mean it</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>
1/19	1/21
<p><i>RWBAT: choose helping words instead of fighting words</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>	<p><i>RWBAT: apologize for and redo communication mistakes</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>
1/26	1/28
<p><i>RWBAT: Demonstrate how to use positive self-talk to calm mad feelings</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>	<p><i>RWBAT: say or do something kind when someone else is mad</i></p> <p>Kotowaza: It's okay to be mad, but it's not okay to be mean</p>

## **Tuesday - 1/12**

*RWBAT: recognize mad feelings and practice cooling down strategies*

Kotowaza: It's okay to be mad, but it's not okay to be mean

1. Sitting in a circle, place Cloud in the center with Mad tucked inside. Invite a student to reveal the feeling tucked inside. Raise your hand if you ever feel mad. Everyone has mad feelings now and then, and it's okay to be mad - even really really mad. But it is never okay to be mean with your face, voice, words or actions.
2. Show me what you look like when you're mad. What makes you feel mad?
3. What happens inside your body when you feel mad? When I feel mad.....
4. What are think you say or do when you're mad?
5. What happens when you let your body to the wrong things like yell, grab, or say hurtful words?
6. Pass around the mad feeling. When students get the feeling they say - " It helps me when I am mad if I..... ( take a breath, think before I speak, say I feel mad, walk away)

Other calm down strategies:

Tell students of some other calming strategies:

- count to 10
- take 3 deep breaths, close my eyes
- relax the body
- hug a kimochi
- visualize a peaceful place
- go to a calm place
- go to kimochi corner
- squeeze something
- mountain breathe
- squeeze lemon

## **Thursday - 1/14**

*RWBAT: review talking vs. fighting voice/ face and practice being assertive to show that they mean it*

Kotowaza: It's okay to be mad, but it's not okay to be mean

1. Can you remind me the difference between a talking / fighting voice and face
2. Have you ever used a calm but strong talking face and voice and found that friends did not respect your words or listen to you. For example you ask a classmate nicely to stop tapping their pencil and they don't stop? This is when it's time to turn up the seriousness, not the meanness in order to be heard. The best way to do this is with our face and our voice.
3. Demonstrate how to widen eye to look serious and like you mean it - have students imitate
4. Demonstrate on Cloud how to tap shoulder, call name, and use a slow rate of speech, volume, and serious voice. - "Cloud ( pause) please stop tapping your pencil
5. Using Cloud demonstrate and then take turns turning up the seriousness when someone doesn't listen



First Attempt: Gentle shoulder tap, call person's name, pause and say when you need

Second Attempt: I asked you to stop nicely

Third Attempt: I asked you twice nicely to stop. Am i going to have to get the teacher?

## **Tuesday 1/19**

*RWBAT: choose helping words instead of fighting words*

1. When you're mad, it's important to be careful about the words you choose to use. There's a big difference between helping words and fighting words.
2. On the board, create a T chart with kid's ideas

Fighting Words	Helping Words
You cheated! Move! Liar! That's not fair! Tattletale! You're not my friend anymore	The rule is.... Can you please give me more space? Thanks! That's not how I heard it It's more fun when everyone plays fair I wish you would come to me before you go to the teacher I am really mad at you.

3. Then pose a few scenarios to the class. Have students first act out what NOT to do and then what to do

Ex scenarios: your friend keeps tapping their pencil,

your friend is on the wrong computer program,

your friend says I'm gonna tell the teacher,

your friend stand right in front of you when you wanted to be the line leader

your partner tells you the wrong answer

## **Thursday - 1/21**

*RWBAT: apologize for and redo communication mistakes*

1. Even though we have already learned so many skills for handling mad feelings, there might be times when we slip up or make a mistake in a mad moment. Everyone makes mistakes, and mistakes can be fixed! So now we are going to practice how to catch ourselves, quickly take responsibility for or own our mistake, and redo the moment!
  2. Pretend Cloud took your pencil without asking. Yell at him in a mean way. "Hey! Why did you steal my pencil? You thief! Then start over by quickly owning the moment and redoing it. Oops I am sorry I yelled. That's my pencil. May I please have it back?
  3. When you redo a moment, you may still be mad, but instead of snapping, you'll choose a more positive way to use your face, voice, or words to express your mad feelings
  4. Put students in pairs to practice redoing a hurtful moment.
  5. For example, if you pushed you would quickly say "I'm sorry I pushed you. I hope you can forgive me. I'm just so mad because....."
  6. Together as a class decide on what to say when you see a students who needs to redo
- Ex: You can be mad but....., can you try that again?

## **Tuesday - 1/26**

RWBAT: Demonstrate how to use positive self-talk to calm mad feelings

1. Raise your hand if you can remember a time when you were really mad. Keep your hand up if you still feel mad about it. Ask students who put their hands down, why they don't feel mad anymore
2. You're not mad anymore because you've bounced back instead of getting stuck in your mad feelings!
3. One way we can help ourselves bounce back is with SELF - TALK
4. SELF - TALK: is what we say to ourselves in our heads
5. negative self talk - sounds like "I can't do it, or no one likes me"
6. positive self talk - is a very important skill

Write on board: What are some positive things we can say to yourself when you feel mad?

- I have been made before and I got through it
- It's okay, everyone makes mistakes
- I can work this out
- Feelings come and go

Have students practice getting mad face/ body → followed by positive self talk examples!!

## **Thursday 1/28**

RWBAT: say or do something kind when someone else is mad

1. What can you do if you see someone is upset? Write responses on board
2. Let's practice kindness when Cloud is mad. Demonstrate how to move toward Cloud in a kind, caring way and ask "What is wrong?"
3. Have students practice with their partner
4. Sometimes people don't want help when they are mad. Sometimes they just want to be alone. Raise your hand if you like to be alone when you are mad. It's okay to feel this way. What do we need to remember when we ask our friends for alone time? ( use talking voice or face)
5. Demonstrate what it looks and sounds like to respond unkindly when Cloud offers comfort and support ( "Leave me alone!")



## **Theoretical Background and Conceptual Framework: Summary of Research Supporting The Kimochis® Educator's Tool Kit**

**The Kimochis® Educator's Tool Kit** is a universal, school-based, social and emotional learning program designed to give children the knowledge, skills and attitudes they need to recognize and manage their emotions, demonstrate caring and concern for others, establish positive relationships, make responsible decisions, and handle challenging situations constructively. These skills have been identified by leading researchers in the field of social and emotional learning as necessary for school success, academic achievement, positive social relationships and the development of emotional competence. The Kimochis® curriculum incorporates innovative, fun and exciting lessons and activities that were developed to teach children how to manage challenging social situations with skill, character and confidence. This overview summarizes the research that supports the design and lesson components of the Kimochis® program.

### **Research Findings Related to the Overall Benefits of Social and Emotional Learning**

#### **Early Childhood Years:**

- Effective interventions that build social, emotional and behavioral skills at a young age can have a positive effect on how children are able to problem-solve and interact with their peers later in life (National Institute for Early Education Research, 2007).
- A convincing body of evidence has been accumulated to indicate that unless children achieve minimal social competence by about the age of 6 years, they have a high probability of being at risk for social-emotional difficulties as adults (Ladd, 2000; Parker & Asher, 1987).
- Strong evidence links social-emotional health in the early childhood years (birth to 6) to:
  - Subsequent school success and health in preteen/teen years
  - Long term health and wellbeing in adulthood
  - Promotion of resilience
  - Prevention of later mental health problems (National Center for Children in Poverty, 2009)
- Research suggests that a child's long-term social and emotional adaptation, academic and cognitive development, and citizenship are enhanced by frequent opportunities to strengthen social competence during early childhood (Hartup & Moore, 1990; Ladd & Profilet, 1996; McClellan & Kinsey, 1999).
- Research underscores the fact that promoting young children's social-emotional competencies significantly enhances school readiness and success (Denham & Weissberg, 2004; Freedman, 2003).

#### **Elementary School:**

- Results from three large-scale reviews of research on the impact of social and emotional learning by the Collaborative for Academic, Social and Emotional Learning (CASEL) in 2008 found that SEL programs yielded positive benefits including:



- 23% improvement in social and emotional skills
- 9% improvement in attitudes about self, others and school
- 9% improvement in school and classroom behavior
- 10% decrease in emotional distress, such as anxiety and depression
- 11% increase in achievement test scores (Payton, et al. 2008)
- Extensive developmental research indicates that effective mastery of social-emotional competence is associated with greater well-being and better school performance, whereas the failure to achieve competence in these areas can lead to a variety of personal, social, and academic difficulties (Eisenberg, 2006; Guerra & Bradshaw, 2008).
- Social and emotional learning has a positive effect on academic performance, including improved skills and grades in math, language arts, and social studies, and better problem-solving and planning skills, and subject mastery (Durlak & Weissberg, 2005; Elias et al., 1997; Greenberg et al., 2003; Hawkins, 1999; Wilson et al., 2001; Zins & Elias, 2006; Zins et al., 2004).
- "Mental health is a critical component of children's learning and general health. Fostering social and emotional health in children as a part of healthy child development must therefore be a national priority." (U.S. Public Health Service, 2000, p. 3).

### **Research Findings Related to the Development of the Kimochis® Curriculum**

The Kimochis® curriculum is based on sound theories of child development and social-emotional learning. Scientific, empirically-based research studies were referred to while developing the Kimochis® lessons to ensure that concepts and approaches that have proven to have beneficial effects on the development of social-emotional skills in children were included. A number of theoretical models and conceptual paradigms were studied, including, theories of Emotional Intelligence (Goleman, 1995; Bar-On, 2000), Social-Information Processing Model (Crick & Dodge, 1994), Social Cognitive Theory (Bandura, 1989) and Cognitive Behavioral Therapy (Kendall, 2005).

In addition, research completed by leading experts in the field of Social and Emotional Learning (SEL) was reviewed. Maurice Elias, a renowned SEL researcher, and his colleagues define SEL as "the process of acquiring core competencies to recognize and manage emotions, set and achieve positive goals, appreciate the perspectives of others, establish and maintain positive relationships, make responsible decisions, and handle interpersonal situations constructively" (1997). The goals of an SEL program are to foster the development of five interrelated sets of cognitive, affective, and behavioral competencies: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Collaborative for Academic, Social and Emotional Learning, CASEL, 2003). These five core competencies provide children a foundation for better adjustment and academic achievement as shown by more positive social behaviors, fewer conduct problems, less emotional distress, and improved test scores and grades (Greenberg et al., 2003). As children master these competencies, they can connect with their own beliefs and values, develop concern for others, make good decisions, and take responsibility for their choices and behaviors. Accordingly, Kimochis® lessons were developed around these five core competencies. The Kimochis® lessons and objectives for Early Childhood and Elementary Age students are outlined on pages 7 and 8.



## **Research Findings Related to the Five Core Competencies and the Kimochis® Lessons**

### **Self-Awareness**

Self-awareness is the ability to recognize and name your own emotions. Self-awareness also involves the ability to understand your values and needs, as well as your strengths and limitations. This awareness of self is crucial to early school success. When a child has an awareness of his/her own emotions, s/he can learn to regulate or modulate them, an essential factor that influences getting along with peers and coping in a school environment. Research by Marsh and colleagues (Marsh, Craven and Debus, 1998; Marsh, Ellis and Craven, 2002) has shown that four-year-olds have an understanding of their psychological selves and of their feelings and intentions. As self understanding develops, it guides moral development and also sets the stage for self control and self regulation. Young children who can identify emotions in themselves are more likely to have success when they transition into kindergarten (Eisenberg and Fabes, 1992). As a child's self-awareness develops, they can label their own emotions and identify the emotions of others. As Daniel Goleman states in his influential book, *Emotional Intelligence*, "Self-awareness, recognizing a feeling as it happens, is the keystone of emotional intelligence. The ability to monitor feelings from moment to moment is also crucial to psychological insight and self-understanding. People with greater certainty about their feelings are better pilots of their lives (Goleman, 1995, p. 43)."

The Kimochis® lessons teach children to identify the nonverbal components (tone of voice, facial expressions, body language) of feelings. Children practice naming situations or experiences that often cause a specific feeling or feelings. Children learn to understand that feelings are messy and that we might have several feelings that occur at the same time! Lessons focus on building emotional literacy, the ability to identify, understand, and respond to emotions in oneself and others in a healthy manner (Joseph, 2003). When children know a wide range of emotion words (beyond *happy, mad, sad*), it is easier for them to understand their emotional experiences and to communicate with others about their feelings. Children are introduced to the concept of how to redo a social mistake, the first step of which requires an awareness of actually making a mistake. They practice how to *own up* and *come clean* as ways to make amends for mistakes. Children also learn that they need to be aware of how they are *coming across* to others in their nonverbal and verbal communication. Activities focus on heightening awareness of these concepts. Educators are encouraged to guide and prompt children to pay attention to their communication and emotions in social interactions throughout the school day.

### **Self-Management**

Self-management is the ability to regulate emotions and behaviors so that goals are achieved. It also involves persevering with difficult tasks and in complex social interactions. Self-management is a complicated, developmental process for young children (Kopp and Wyr, 1994). It requires children to remember and generalize what they have been taught by caregivers, to initiate changes in their behavior, and to constantly monitor their behavior in varying situations. These foundational self-management skills are emerging during the preschool years as the brain develops (Shonkoff & Phillips, 2000). Development in self-management can be seen in the difference between the impulsivity of a toddler and the deliberate



behavior of a four year-old entering kindergarten in the fall. The relevancy of self-management skills to school success is obvious. When children can control impulses and cope with strong feelings in emotionally charged situations, they will be more successful in school (Raver & Knitzer, 2002). In fact, some studies have shown that certain aspects of self-regulation predict children's reading and math achievement in the early primary grades (Alexander, Entwisle & Dauber, 1993; Howse, 2003). Additionally, the ability to effectively manage emotions contributes to less aggression and fewer problems with substance abuse (Brady, et al., 1998; Vitaro, 1998). Children with poor regulation skills are likely to have conflict-based relationships with their teachers and peers, which can lead to school problems and possible school dropout (Bandera, 2003). When educators are asked to identify areas of critical importance with regard to school success, they often name competence in cooperation and self-control as highly significant (Lane, Pierson, & Givner, 2003). There is some evidence that emotion regulation is a better predictor of school readiness than IQ (Blair & Razza, 2007). Children can learn strategies to manage their emotions and cope with stressful situations. Research suggests that teaching children strategies such as thinking calming thoughts, deep breathing, doing a calming activity and reframing stressful situations by focusing on positive promotes effective management of feelings such as anger (Nelson and Finch, 2000) and impatience (Metcalf and Mischel, 1999; Eisenberg, Cumberland, and Spinrad, 1998).

The Kimochis® curriculum emphasizes the importance of teaching children to handle positive (happiness, pride) and negative (mad, frustrated, disappointed) emotions in ways that are productive and socially appropriate. The focus is on helping both educators and children understand that feelings fuel behavior (*Feeling-Behavior Link*). Lessons teach strategies such as taking *Cool Down* breaths, repeating positive self-talk strategies, and reframing upsetting situations in a more positive light. Children learn to regulate their tone of voice, facial expressions, body language, actions and word choice. Lessons help children to recognize how difficult it is to use emotion-management strategies when feelings are high. So, children are given opportunities to practice these strategies "out of the moment" when they can rely on logical reasoning and adult prompting to manage emotions (Metcalf and Mischel, 1999). Role-plays, puppet enactments and games give children practice in predictable social situations. Educators are provided ideas on how to prompt children to use their emotional regulation strategies when needed in social settings.

## **Social Awareness**

Social awareness is the ability to understand what others are feeling and to be able to take their perspective. This is often described as "theory of mind." Researchers also talk about social awareness as the development of *empathy*, which is the response we have when we are able to recognize and understand another's emotions. Preschoolers who are more socially and emotionally perceptive have greater success in their relationships with peers and adults (Denham, 2003). Young children who are adept at understanding other's feelings tend to have more academic success at the primary level (Izard, 2002; Dowsett & Huston, 2005). Preschoolers progress through a period of development that helps them to understand that people's intentions, desires, feelings, thoughts and beliefs are motivators of behavior. As their ability to identify emotions in others increases, they are able to explain the causes of emotions and their consequences in developmentally more complex ways (Denham, 2006; Lagattuta & Thompson, 2006). Empathy plays an important role in relationship to academic and emotional success. Kaukiainen (1999) found that children who had good perspective-taking skills were less likely to be physically, verbally and



emotionally aggressive toward their peers. Other researchers have found that empathic children support their peers more frequently, are better liked and have higher academic achievement (Litvack-Miller, McDougall, & Romney, 1997; Izard, Fine, Schultz, Mostow, & Ackerman, 2001).

The Kimochis® program helps children to be aware of others' emotions and intentions by teaching them simple observation and communication strategies. Young children learn the importance of getting the attention of a peer or an adult in way that feels good to all. Children learn to use people's names, gain eye contact before speaking and to use a gentle tap (*communication tap*) on the shoulder. These communication tools send the message that the communication intent is positive and that everyone is prepared for an interaction. Social awareness is learning how to pay attention to what others are doing and feeling. Most children have a desire to be kind and compassionate when they notice others are feeling left out or sad, but they may not know what words to say or actions to take. Kimochis® lesson teach children strategies on how to actively include others and be kind to partners even if that partner may not be their first choice. Through repeated practice in role plays outside of emotional moments, children can learn how to coordinate their own desires, needs, and interests with those of others.

## **Relationship Skills**

To be successful in school, children need to be able to form positive social relationships, work cooperatively in teams and deal effectively with conflict. Research suggests that children can develop positive peer relationships, acceptance and friendships when taught social skills through intentional instruction, practice opportunities, and guidance in teachable moments (Dunn & McGuire, 1992). Children who learn social-emotional skills early in life are more self-confident, trusting, empathic, intellectually inquisitive, competent in using language to communicate, and capable of relating well to others (Cohen, Onunaku, Clothier, & Poppe, 2005). When young children are provided practical social-emotional strategies and modeling by adults, they can develop the ability to initiate and join groups of peers, to cooperatively and spontaneously share with others, to communicate in ways that others understand, and to use strategies (i.e., turn-taking) to avoid conflict (Howes, 1987, 1988; Vandell, Nenide & Van Winkle, 2006). Children who enjoy positive relationships with peers experience higher levels of emotional well-being, and have self-beliefs that are stronger and more adaptive than children without positive peer relationships. They also tend to be engaged in and even excel at academic tasks more than those who have peer relationship problems (Rubin, Bukowski, & Parker, 2006; Wentzel, 2005). Students who have established friendships with classmates are more likely to enjoy a relatively safe school environment and are less likely to be the targets of peer-directed violence and harassment than their counterparts without friends (Schwartz et al., 2000). When children can use effective social problem solving skills, they develop an ability to cope with stress (Dubow & Tisak, 1989; Elias & Clabby, 1988), handle interpersonal situations (Elias & Clabby, 1988), experience more positive social adjustment, improve academically, and show improvements in behavior (Dubow & Tisak, 1989; Gootman, 2001; Nelson et al, 1996).

The development of relationship skills is at the heart of the Kimochis® Way! When children have positive relationships they are happier, healthier and more productive. The combination of modeling (teacher, puppet, and peer), practice, coaching, and positive reinforcement is an established best practice to teach





social behaviors to children (Elliot and Gresham, 1993). The Kimochis® curriculum provides educators a number of activities and lessons that focus on building the interpersonal skills of children of all ages. Younger children will need intentional instruction and guidance in sharing and taking turns. By using the Kimochis® characters as puppets, young children can learn the communication scripts needed to solve commonly-occurring social problems in preschool (i.e., hitting, grabbing, yelling). Lessons for older children focus on implementing role plays that give children practice in using important skills such as joining groups, apologizing sincerely, forgiving in compassionate and caring ways and standing up for yourself and others. Ideas are provided for additional activities such as reading related children's books, engaging in art activities, asking older children to journal as ways to extend the learning beyond the Kimochis® lessons. Letters and activity pages are available to send home to parents so they can understand the skills and common language practiced in the Kimochis® lessons and the social-emotional learning can be extended into the home setting.

### **Responsible Decision Making**

All educators and parents strive to teach children how to make responsible decisions. Children can learn to make ethical and constructive choices about their personal and social behavior. Focus in the classroom and school community needs to be placed on problem solving, reflection, perceptive thinking, self-direction, and motivation-skills that will contribute to life-long success (Adams and Hamm 1994). Research shows that students need effective problem-solving skills when making decisions about social situations (Denham & Almeida, 1987). Children also need to know how to make good choices about their own behavior in the classroom and at school. A number of research teams have found that individual differences in children's cooperation capacities are directly associated with children's academic achievement in the early primary grades (Alexander, Entwisle, Dauber 1993; McClelland, Morrison, Holmes 2000). Children can practice making responsible social and behavioral decisions appropriate to their age level and can learn how to make choices that are respectful, realistic and responsible. They also need to think about how their actions will affect themselves and others, what their options actually are and what the outcome of their chosen path is likely to be.

The Kimochis® lessons provide structured opportunities for skill instruction and practice in the areas of self-awareness, self-management, social awareness and relationship skills. Intentional teaching combined with adult prompting, positive reinforcement, peer-to-peer monitoring and student monitoring promotes the use of the learned skills throughout the school day and in settings outside of the school community. This instruction, practice and generalization build the foundation for children to become skilled at social problem-solving and responsible decision making. As children master the skills in the Kimochis® lessons, they are on their way to knowing how to conduct themselves with personal, moral and emotional responsibility.



## Kimochis® Educator's Tool Kit: Curriculum Lessons

<b>CASEL Core Competencies*</b> Children will be able to :	<b>Early Childhood Lesson objectives</b> Children will be able to:	<b>Elementary Age Lesson objectives</b> Children will be able to:
<b>Self-Awareness</b> <ul style="list-style-type: none"> <li>Recognize &amp; name emotions</li> <li>Understand reasons &amp; circumstances for feelings</li> <li>Know needs &amp; values</li> <li>Describe interests &amp; values</li> <li>Accurately assess strengths &amp; challenges</li> </ul>	<ul style="list-style-type: none"> <li>Identify &amp; name feelings</li> <li>Show an understanding of different facial expressions</li> <li>Describe social situations that can create a feeling</li> <li>Relate to Kimochis® characters' personalities</li> <li>Identify the difference between a taking voice/face/body &amp; a fighting voice/face/body</li> <li>Identify the difference between helping and hurtful words</li> <li>Show an understanding of how to act at silly and serious times</li> <li>Identify how to make a safe choices when curious</li> </ul>	<ul style="list-style-type: none"> <li>Identify &amp; name feelings</li> <li>Show an understanding of different facial expressions</li> <li>Relate to Kimochis® characters' personalities</li> <li>Describe social situations that can create certain feelings</li> <li>Identify the difference between a taking voice/face/body &amp; a fighting voice/face/body</li> <li>Identify the difference between helping &amp; hurtful words</li> <li>Identify when a redo is needed</li> <li>Recognize social cues &amp; be sure that silliness is fun for everyone</li> <li>Demonstrate an understanding of how you are <i>coming across</i></li> <li>Demonstrate how to <i>own up &amp; come clean</i> when mistakes are made</li> </ul>
<b>Self-Management</b> <ul style="list-style-type: none"> <li>Manage stress &amp; control impulses</li> <li>Verbalize &amp; cope appropriately with challenging emotions</li> <li>Persevere in overcoming obstacles</li> <li>Set &amp; monitor progress toward the achievement of personal &amp; academic goals</li> <li>Modify performance based on feedback</li> </ul>	<ul style="list-style-type: none"> <li>Use a taking voice/face/body</li> <li>Demonstrate how to use <i>Cool Down</i> strategies to express upset feelings in a positive way</li> <li>Use self-soothing strategies to comfort self when sad</li> <li>Use self-regulation tools to manage scared feelings</li> <li>Demonstrate words &amp; actions to use when others hit, push, yell</li> <li>Demonstrate how to use <i>Stop</i> hands to resolve conflicts</li> <li>Demonstrate how to label hurtful words with "Ouch"</li> <li>Demonstrate how to manage silliness in a safe &amp; friendly way</li> <li>Redo cranky moments</li> <li>Take back bossy talk</li> <li>Demonstrate how to accept a compliment in a positive way</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate talking tone of voice, face &amp; body (positive nonverbal communication)</li> <li>Demonstrate <i>Cool Down</i> strategies to cope with upset feelings</li> <li>Show how to use a talking hand &amp; <i>Stop</i> hands to resolve conflicts</li> <li>Use positive self-talk scripts to move through upset feelings</li> <li>Cope with statements that are <i>Big mean things that aren't true</i></li> <li>Show how to stay focused &amp; not get distracted by others</li> <li>Use positive self-talk to try new things</li> <li>Redo a hurtful social moment</li> <li>Show how to express happy, excited, silly, &amp; curious feelings with safe &amp; wise choices</li> <li>Show how to <i>give/receive a knowing look</i> to help peers redo hurtful moments</li> <li>Identify ways to warn others when upset</li> <li>Use self-regulation tools to manage expressions of pride without bragging</li> </ul>

<b>CASEL Core Competencies*</b> Children will be able to :	<b>Early Childhood Lesson objectives</b> Children will be able to:	<b>Elementary Age Lesson objectives</b> Children will be able to:
<b>Social Awareness</b> <ul style="list-style-type: none"> <li>Understand others' perspectives, feelings &amp; points of view</li> <li>Show empathy &amp; sensitivity to others' feelings</li> <li>Recognize &amp; appreciate individual &amp; group similarities &amp; differences</li> <li>Show respect to others</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how to get a person's attention in an appropriate way</li> <li>Demonstrate how to use a talking hand to resolve conflicts</li> <li>Use words &amp; actions when peers cut in line, get in your way or invade your space</li> <li>Respect others' personal &amp; space boundaries</li> <li>Demonstrate caring actions toward peers who are feeling sad</li> <li>Offer encouragement to peers who are frustrated</li> <li>Demonstrate how to give compliments to peers</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how to get a person's attention in an appropriate way</li> <li>Include others who are feeling left out</li> <li>Demonstrate how to accept &amp; work with a partner kindly &amp; respectfully</li> <li>Show an understanding about the concept of <i>first impressions</i></li> <li>Show a positive response when peers brag</li> <li>Demonstrate how to avoid taking peers' negative words personally</li> <li>Respect others' personal &amp; space boundaries</li> <li>Recognize &amp; offer support to peers</li> <li>Respect others' feelings of fear &amp; sadness</li> </ul>
<b>Relationship Skills</b> <ul style="list-style-type: none"> <li>Establish &amp; maintain healthy, rewarding relationships based on cooperation</li> <li>Show sensitivity to social-emotional cues</li> <li>Prevent, manage, &amp; resolve interpersonal conflicts</li> <li>Communicate clearly</li> <li>Engage others in social situations</li> <li>Seek &amp; provide help when needed</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate saying hello &amp; giving <i>Friendly Signals</i> to connect with others</li> <li>Demonstrate sharing &amp; turn-taking</li> <li>Demonstrate how to get included when left out</li> <li>Include peers who are left out</li> <li>Offer comfort to peers who are sad</li> <li>Use a communication tool to set limits when others are cranky or bossy</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate how to use greetings &amp; <i>Friendly Signals</i> to connect with others</li> <li>Demonstrate positive ways to get included in play &amp; conversation</li> <li>Set boundaries when peers are too silly</li> <li>Apologize with sincerity &amp; truthfulness</li> <li>Forgive others who make hurtful mistakes</li> <li>Let others try again</li> <li>Listen to why your words &amp;/or actions can create upset feelings</li> <li>Use communication tools to set limits when others are upset</li> <li>Demonstrate how to act in kind &amp; caring ways when others are upset</li> <li>Identify when &amp; how to get adult help</li> <li>Connect with another's pride positively</li> </ul>
<b>Responsible Decision-Making</b> <ul style="list-style-type: none"> <li>Analyze &amp; identify problems</li> <li>Use social decision-making skills</li> <li>Respond constructively to interpersonal obstacles</li> <li>Conduct self with moral &amp; personal responsibility</li> </ul>	<ul style="list-style-type: none"> <li>Identify strategies to stay safe when trying new things</li> <li>Demonstrate how to tell the truth</li> <li>Name how to solve problems through curiosity</li> </ul>	<ul style="list-style-type: none"> <li>Stand up for what is right</li> <li>Stand up for self &amp; others</li> <li>Demonstrate how to <i>bounce back</i> when obstacles arise</li> <li>Assume the best in social interactions</li> <li>Demonstrate how to do the right thing when others do the wrong thing</li> <li>Demonstrate hope &amp; activate optimism that things will work out</li> </ul>
<p>* Collaborative for Social and Emotional Learning has identified five core competencies that are learned through social and emotional interventions, all crucial to life, learning and work (CASEL, 2003)</p>		



## References

- Adams, D.M., Hamm, M. (1994). *New designs for teaching and learning: Promoting active learning in tomorrow's schools*. SF: Jossey-Bass
- Alexander, K., Entwisle, D. R., Dauber, S. L. (1993). First Grade Classroom Behavior: Its Short- and Long-Term Consequences for School Performance. *Child Development*, Vol. 64, 801–14.
- Bandura, A. (1989). Human agency in Social Cognitive Theory. *American Psychologist*, 44, 1175–1184.
- Bandura, A., Caprara, G. V., Barbaranelli, C., Gerbino, M., Pastorelli, C. (2003). Role of affective self-regulatory efficacy in diverse spheres of psychosocial functioning. *Child Development*. Vol. 74, No. 3.
- Bar-On, R., Parke, J. (2000). *The Handbook of Emotional Intelligence*. San Francisco: Jossey-Bass.
- Blair, C., Razza, R. P. (2007). Relating effortful control, executive function, and false belief understanding to emerging math and literacy ability in kindergarten. *Child Development*, 78(2), 647–663.
- Brady, K. T., Myrick, H., McElroy, S. (1998). The relationship between substance use disorders, impulse control disorders, and pathological aggression. *American Journal on Addictions*, 7, 221–230.
- Brown, J. R., Dunn, J. (1996). Continuities in emotion understanding from 3–6 years. *Child Development*, 67, 789–802.
- Cohen, J., Onunaku, N., Clothier, S., & Poppe, J. (2005). Helping young children succeed: Strategies to promote early childhood social and emotional development. (Research and Policy Report). Washington, D.C.: National Conference of State Legislatures.
- Crick, N. R., Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin*, 115, 74–101.
- Denham, S. (2006). The emotional basis of learning and development in early childhood education. *Handbook of Research on the Education of Young Children* (Second edition).
- Denham, S. A., & Almeida, M. C. (1987). Children's social problem-solving skills, behavioral adjustment, and interventions: A meta-analysis evaluating theory and practice. *Journal of Applied Developmental Psychology*, 8, 391–409.
- Denham, S. A., Weissberg, R. P. (2004). Social-emotional learning in early childhood: What we know and where to go from here. In E. Chesebrough, P. King, T. P. Gullotta, & M. Bloom (Eds.), *A Blueprint for the Promotion of Prosocial Skills*. New York: Kluwer/Academic Publishers.
- Denham, S.A., Blair, K.A., DeMulder E., Levitas J., Sawyer, K., Auerbach-Major, Queenan, P. (2003). Preschool emotional competence: Pathway to social competence? *Child Development*, 74:238–256



Dowsett, C., Huston, A. ( 2005). The Role of Social-Emotional Behavior in School Readiness." In Duncan, G. (Chair), *Hard Skills and Socioemotional Behavior at School Entry: What Matters Most for Subsequent Achievement?* Symposium presented to the biennial meeting of the Society for Research in Child Development, Atlanta, Georgia, April 2005.

Dubow, E. F., Tisak, J. (1989). The relation between stressful life events and adjustment in elementary school children: The role of social support and social problem-solving skills. *Child Development*, 60(6), 1412-1423.

Dunn, J. McGuire, S. (1992). Sibling and peer relationship in childhood. *Journal of Child Psychology and Psychiatry and Allied Disciplines*, 33, 67-105.

Eisenberg, N. (2006). Volume 3: Social, emotional, and personality development. In W. Damon & R. M. Lerner (Series Eds.), *Handbook of child psychology* (6<sup>th</sup> ed). New York: Wiley.

Eisenberg, N., Cumberland, A., Spinrad, T. L. (1998). Parental socialization of emotion. *Psychology Inquiry*, 9, 241-273.

Eisenberg, N., Fabes, R. A., Losoya, S. (1997). Emotional responding: Regulation, social correlates, and socialization. In P. Salovey and D. J. Slutsy (Eds.), *Emotional development and emotional intelligence: Educational implications*, New York: BasicBooks.

Elias, M. J. (2004). Strategies to infuse social and emotional learning into academics. In J. E. Zins, R. P. Weissberg, M. C. Wang, H. J. Walberg (Eds). *Building academic success on social and emotional learning: What does the research say?* New York, NY: Teachers College Press.

Elias, M. J., Clabby, J. F. (1992). *Building social problem-solving skills: Guidelines from a school-based program*. San Francisco: Jossey-Bass Publishers.

Elias, M. J., Clabby, J. F. (1988). Teaching social decision making. *Educational Leadership*, 45(6), 52-55

Elias, M., Gara, M., Schuyer, T., Branden-Muller, L., & Sayette, M. (1991). The promotion of social competence: Longitudinal study of a preventive school based program. *American Journal of Orthopsychiatry*, 61, 409-417.

Elias, M. J., Zins, J.E., Weissberg, R. P., Frey, K.S., Greenberg, M.T., Haynes, N.M., Kessler, R., Schwab-Stone, M.E., and Shriver, T.P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.

Elliot, S. N., Gresham, F. M. (1993). Social skills interventions for children. *Behavior Modification*, 17 (3), 287-313.

Freedman, J. (2003). Key lessons from 35 years of social-emotional education: How self-science builds self-awareness, positive relationships, and healthy decision-making. *Perspectives in Education*, 21(4), 69-80.



Goleman, D. (1995). *Emotional Intelligence: Why It Can Matter More Than IQ*. Bantam.

Gootman, M. E. (2001). *The caring teacher's guide to discipline: Helping young students learn self-control, responsibility, and respect* (2nd ed.). Thousand Oaks, CA: Corwin Press, Inc.

Greenberg, M. T., Weissberg, R. P., O'Brien, M. U., Zins, J. E., Fredericks, L., Resnik, H., et al. (2003). Enhancing school-based prevention and youth development through coordinated social, emotional, and academic learning. *American Psychologist*, 58, 466–474.

Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New Directions for Child and Adolescent Development*, 122, 1–17.

Hansen, W. B., (1992). School-based substance abuse prevention: A review of the state of the art in curriculum, 1980-1990. *Health Education Research*, 7, 403-430.

Hartup, W. W., & Moore, S. G. (1990). Early peer relations: Developmental significance and prognostic implications. *Early Childhood Research Quarterly*, 5(1), 1-18. EJ 405 887.

Howes, C. (1987). Social competence with peers in young children: Developmental sequences. *Developmental Review*, Vol. 7, 252–72.

Howes, C. (1988). Peer interaction young children. *Monographs of the Society for Research in Child Development*, Vol. 53.

Howse, R. B., Lange, G., Farran, D. C., & Boyles, C. D. (2003). Motivation and self-regulation as predictors of achievement in economically disadvantaged young children. *Journal of Experimental Education*, 71(2), 151–174.

Izard, C., Fine, S., Schultz, D., Mostow, A., Ackerman, B., & Youngstrom, E. (2001). Emotion knowledge as a predictor of social behavior and academic competence in children at risk. *Psychological Science*, 12, 18–23.

Johnson, D.W., Johnson, R.T., Maruyama, G. (1983). Interdependence and interpersonal attraction among heterogeneous and homogeneous individuals: A theoretical formulation and a meta-analysis of the research. *Review of Educational Research*, 53, 5-54.

Joseph, G.E., Strain, P.S., (2003). Helping young children control anger and handle disappointment. *Young Exceptional Children*, 7 (1), 21-29.

Joseph, G. E., & Strain, P. S. (2003). Enhancing emotional vocabulary in young children. *Young Exceptional Children*, 6(4), 18-26.

Kaukiainen, A., Bjorkqvist, K., Lagerspetz, K., Osterman, K., Salmivalli, C., Rothberg, S., et al. (1999). The relationships between social intelligence, empathy, and three types of aggression. *Aggressive Behavior*, 25, 81–89.



- Kendall, P.C. (2005). *Child and Adolescent Therapy: Cognitive-Behavioral Procedures* (3rd ed.). Guilford Press
- Koop, C. B., Wyer, N. (1994). Self-regulation in normal and atypical development. In *Disorders and Dysfunctions of the Self (Rochester Symposium on Developmental Psychopathology)*, Vol. 5. NY: University of Rochester Press.
- Ladd, G. W. (1999). Peer relationships and social competence during early and middle childhood. *Annual Review of Psychology*, 50, 333-359.
- Ladd, G. W. (2000). The fourth R: Relationships as risks and resources following children's transition to school. *American Educational Research Association Division E Newsletter*, 19(1), 7, 9-11.
- Ladd, G. W., Profilet, S. M. (1996). The child behavior scale: A teacher-report measure of young children's aggressive, withdrawn, and pro-social behaviors. *Developmental Psychology*, 32(6), 1008-1024.
- Lagattuta, K., Thompson, R.A. (2007). The Development of Self-Conscious Emotions: Cognitive Processes and Social Influences. in *Self-Conscious Emotions: Theory and Research* (Second edition).
- Lane, K. L., Pierson, M., Givner, C. C. (2003). Teacher expectations of student behavior: Which skills do elementary and secondary teachers deem necessary for success in the classroom? *Education and Treatment of Children*, 26, 413-430.
- Linares, O. L., Rosbruch, N., Stern, M. B., Edwards, M. E., Walker, G., Abikoff, H. B. (2005). Developing cognitive-social-emotional competencies to enhance academic learning. *Psychology in the Schools*, 42 (4), 405-417.
- Litvack-Miller, W., McDougall, D., & Romney, D. M. (1997). The structure of empathy during middle childhood and its relationship to prosocial behavior. *Genetic, Social, and General Psychology Monographs*, 123(3), 303-324.
- Marsh, H., Craven, R., Debus, R. (1998). Structure, stability, and development of young children's self-concepts: A Multicohort-multioccasion study. *Child Development*, Vol. 69, No. 4, 1030-53.
- Marsh, H., Ellis, J., Craven, R. (2002). How do preschool children feel about themselves? Unraveling measurement and multidimensional self-concept structure. *Developmental Psychology*, Vol. 38, No. 3, 376-93.
- McClellan, D. E., & Kinsey, S. (1999). Children's social behavior in relation to participation in mixed-age or same-age classrooms. *Early Childhood Research & Practice*. Available online: <http://ecrp.uiuc.edu/v1n1/v1n1.html>.
- Metcalfe, J., Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106, 3-19.



Munro, S., O'Brien, M.U., Payton, J., Weissberg, R.P. (2006). Cooperative learning helps create the essential skill of working (and compromising) within a group. *Edutopia*, 2(6), 53-58.

National Center for Children in Poverty (2002). *Promoting the emotional well-being of children and families: Ready to enter-What research tells policymakers about strategies to promote social and emotional school readiness among three and four-year-old children*, Policy Brief #3.

National Institute for Early Education Research (2007). *Preschool matters: Rx for behavior problems in pre-K*, Volume 5, No. 5.

Nelson, J. R., Dykeman, C., Powell, S., Petty, D. (1996). The effects of a group counseling intervention on students with behavioral adjustment problems. *Elementary School Guidance & Counseling*, 31(1), 21-33.

Nelson, W. M., III, & Finch, A. J., Jr. (2000). Managing anger in youth: A cognitive-behavioral intervention approach. In P. C. Kendall (Ed.), *Child and adolescent therapy: Cognitive-behavioral procedures*. New York: The Guilford Press.

Parker, J. G., Asher, S. R. (1987). Peer relations and later personal adjustment: Are low-accepted children at risk? *Psychological Bulletin*, 102(3), 357-389.

Payton, J., Weissberg, R.P., Durlak, J.A., Dymnicki, A.B., Taylor, R.D., Schellinger, K.B., & Pachan, M. (2008). *The positive impact of social and emotional learning for kindergarten to eighth-grade students: Findings from three scientific reviews*. Chicago, IL: Collaborative for Academic, Social, and Emotional Learning

Raver, C. C., Knitzer, J. (2002). *Ready to enter: What research tells policymakers about strategies to promote social and emotional school readiness among three- and four-year-old children* (Policy Paper No. 3). New York:

National Center for Children in Poverty, Columbia University Mailman School of Public Health.

Rubin, K. H., Bream, L. A., & Rose-Krasnor, L. (1991). Social problem-solving and aggression in childhood. In D. J. Pepler & K. H. Rubin (Eds.), *The development and treatment of childhood aggression*. Hillsdale, NJ: Lawrence Erlbaum Assoc.

Schwartz, D., Dodge, K. A., Coie, J. D. (1993). The emergence of chronic peer victimization in boys' play groups. *Child Development*, 64, 580-588.

Shonkoff, J.P., Phillips, D.A. (2000). *From neurons to neighborhoods: The science of early childhood development*. National Academy Press.

U.S. Public Health Service. (2000). Report of the Surgeon General's Conference on Children's Mental Health. Washington, DC: Department of Health and Human Services.

Vandell, D. L., Nenide, L., Van Winkle, S. J. (2006). Peer relationships in early childhood. In *Blackwell Handbook of Early Childhood Development*. Oxford, UK: Blackwell.



Vitaro, F., Brendgen, M., Larose, S., Tremblay, R. E. (2005). Kindergarten disruptive behaviors, protective factors, and educational achievement by early adulthood. *Journal of Educational Psychology*, 97(4), 617–629.

Vitaro, F., Ferland, F., Jacques, C., Ladouceur, R. (1998). Gambling, substance use, and impulsivity during adolescence. *Psychology of Addictive Behaviors*, 12(3), 185–194.

Wentzel, K. R. (1991). Social competence at school: Relation between social responsibility and academic achievement. *Review of Educational Research*, 61, 1–24.

Wentzel, K. R. (1993). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology*, 85(2), 357–364.

Zins, J.E., Weissberg, R.P., Wang, M.L., Walberg, H.J. (Eds.) (2003). *Building school success through social and emotional learning: Implications for practice and research*. New York: Teachers College.



## The Interaction Effects of Program Training, Dosage, and Implementation Quality on Targeted Student Outcomes for The RULER Approach to Social and Emotional Learning

Maria Regina Reyes, Marc A. Brackett, Susan E. Rivers,  
Nicole A. Elbertson, and Peter Salovey  
*Yale University*

**Abstract.** This study examined how training, dosage, and implementation quality of a social and emotional learning program, The RULER Approach, were related to students' social and emotional competencies. There were no main effects for any of the variables on student outcomes, but students had more positive outcomes when their teachers (a) attended more trainings and taught more lessons, and (b) were classified as either moderate- or high-quality program implementers. Student outcomes were more negative when their teachers were classified as low-quality implementers who also attended more trainings and taught more lessons. Post hoc analyses revealed that low-quality implementers felt less efficacious about their overall teaching than high-quality implementers. The discussion focuses on the importance of assessing the interaction of training and implementation variables when examining the effect of social and emotional learning programs.

School programs that aim either to prevent maladaptive behaviors (August, Bloomquist, Lee, Realmuto, & Hektner, 2006; Conduct Problems Research Group, 2011) or to promote positive development among youth (Domitrovich, Cortes, & Greenberg, 2007; Jones, Brown, & Aber, 2011) have been flourishing across the United States. These programs generally fall under the umbrella term, *social and emotional learning* (SEL), which refers to the process of acquiring the skills of self- and social awareness, emotion regulation, responsible decision making, problem solving, and relationship management (Zins, Weissberg, Wang, & Walberg, 2004). Accordingly,

SEL programs are designed both to enhance these skills and create an emotionally supportive climate to increase the likelihood of school engagement, attendance, and academic success. The effects of these programs on youth outcomes have been positive (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011), but most evaluations did not include training or implementation data (Gottfredson & Gottfredson, 2002; Lewis, Battistich, & Schaps, 1990; Tanyu, 2007). The variables surrounding implementation need to be assessed both in research and in practice to better understand the effectiveness of programs in achieving their intended goals (Dane & Schneider, 1998;

---

Correspondence regarding this article should be addressed to Marc A. Brackett, Yale University, 2, Hillhouse Avenue, New Haven, CT 06511; e-mail: marc.brackett@yale.edu

Copyright 2012 by the National Association of School Psychologists, ISSN 0279-6015

Durlak & DuPre, 2008; Sanetti & Kratochwill, 2009). The relative importance of the quantity of teacher training, the dosage, or number of lessons students receive, and the quality of implementation, including teacher attitudes toward programming and their delivery style, are of particular interest in SEL programming.

In this study, we examined the extent to which these training and implementation variables for an SEL program, The RULER Approach ([www.therulerapproach.org](http://www.therulerapproach.org)), were related to targeted social and emotional outcomes for students during the program's first year of implementation. We begin with a short overview of literature on program implementation followed by a description of SEL programs. We then highlight the important role that teachers play as implementers of SEL programs.

### Implementing SEL Programs

Programs introduced into social settings like schools are not always implemented with fidelity (Fixsen, Blase, Naoom, & Wallace, 2009). This makes formative evaluations or the study of the processes underlying program implementation critical. Implementation occurs in six stages (Fixsen, Naoom, Blase, & Wallace, 2007). In the *exploration stage*, schools consider which program to adopt by examining feasibility and fit. In the *installation stage*, key stakeholders decide that the program will be implemented and plan for its proper execution. In the *initial implementation stage*, staff members are hired; participants are recruited; organizational supports are in place; and because all stakeholders are new to the program, problem solving and troubleshooting are frequent. In the *full implementation stage*, the program is fully integrated, with program processes and procedures part of the regular routine. Once the program has been implemented effectively, improvements are generally tested in the *innovation stage*. Sustaining the program both through continuous staff development and funding support comprise the *sustainability stage*.

Program implementation is rarely a perfect process, and a growing body of research

shows that the effectiveness of school-based prevention programs is limited by the extent that they are implemented as intended (Dusenbury, Brannigan, Falco, & Hansen, 2003). Schools have wide-ranging priorities, policies, and politics that may interfere with how a program is delivered (e.g., Fagan & Mihalic, 2003; Gager & Elias, 1997). The evidence of SEL program effectiveness is growing; for example, a meta-analysis of over 200 studies shows that SEL programs have the intended positive effect on students' academic performance and their social and emotional skills (Durlak et al., 2011). Thus, schools will be implementing SEL programs in increasing numbers with varying levels of fidelity. Central to the understanding of how these programs are implemented is the role of teachers, who are the primary deliverers or "intervention drivers" (cf. Fixsen et al., 2009) of SEL programs.

### Assessing Training and Implementation Training

Training is the knowledge acquisition component of an SEL program and is the main avenue by which programs are introduced and implemented in schools. Training, which may include both workshops and coaching, is the vehicle by which teachers acquire background information, theory, and philosophy of the SEL program. Program information generally is introduced in initial trainings; then, follow-up coaching develops teacher's implementation skills more fully (Fixsen et al., 2009; Sanetti & Kratochwill, 2009; Strother, 1989). In their review, Joyce and Showers (2002) revealed that when training was combined with coaching, 95% of teachers acquired knowledge and developed skills for applying that knowledge in the classroom. In the absence of coaching, only 5% of teachers applied the skills in the classroom.

### Dosage

Dosage refers to the number of lessons that teachers implement for students to receive in the classroom. There is some evidence that

higher doses of program instruction produce more optimal results in certain intervention contexts (e.g., Connell, Turner, & Mason, 1985). For example, the number of lessons taught significantly affected students' healthy eating in one intervention (Story et al., 2000) and students' perceptions of healthy sexual behaviors in another (James, Reddy, Ruiter, McCauley, & van den Borne, 2006). However, an investigation of one school-based alcohol abuse prevention program revealed that dosage (e.g., teacher reports of the number of class periods used to teach program materials) was not systematically related to reductions in drinking behavior (Hopkins, Mauss, Kearney, & Weisheit, 1988). Among SEL programs, where a primary goal is to improve students' social and emotional skills and engagement in learning, the number of SEL lessons delivered was related to slower growth in negative student outcomes (Aber, Jones, Brown, Chaudry, & Samples, 1998) and fewer unexcused absences (an indicator of engagement) among girls but not among boys (Moskowitz, Schaps, & Malvin, 1982). In sum, these findings suggest that higher dosage may lead to better outcomes.

### **Implementation Quality**

Implementation quality refers to the manner in which a program is being executed (Dane & Schneider, 1998). As the deliverers of SEL programs, teachers' style of delivery is as important as the content (Jennings & Greenberg, 2009). Teachers' delivery styles and attitudes toward the program need to be congruent with the program. For example, SEL lessons often involve sharing personal experiences and being sensitive to students' needs. If teachers lack buy-in and motivation to engage with students openly, there may be dissonance between them and the SEL lesson. In this section, we discuss two components of quality that are critical to SEL programming, in particular: (a) delivery, which refers to quality of program execution or teaching effectiveness, and (b) attitudes, which refer to program buy-in or openness to programming.

Delivery style is vital to SEL programs because they require teachers to deliver the lessons in an effective manner, consistent with the program's philosophy and goals (see Fixsen et al., 2009; Waltz, Addis, Koerner, & Jacobson, 1993). For example, the teacher's display of certain emotions is important for many SEL lessons (Brackett et al., 2009; Elbertson, Brackett, & Weissberg, 2009). If a teacher cannot model the social and emotional skills a program is designed to target, that teacher will likely be less effective in imparting these skills to students. In general, teachers' beliefs about their teaching efficacy also influence their delivery of instructional programming (Han & Weiss, 2005).

Related to delivery style are teacher attitudes toward SEL programming, which also are critical to a program's success (see August et al., 2006). One study showed that within the context of a smoking prevention program, classrooms with teachers who had higher ratings on both positive attitudes (toward the program and their students) and preparedness had students with greater knowledge of and better decision-making skills about smoking (Botvin, Dusenbury, Baker, & James-Ortiz, 1989). Resistance to adopting SEL programs is common among teachers within the context of SEL. Some teachers are skeptical of the effect of SEL programs (Elias, Bruene-Butler, Blum, & Schuyler, 2000). They may be uncertain about the relative importance of SEL compared to other curricular efforts (Buchanan, Gueldner, Tran, & Merrell, 2009). Issues of accountability, such as those stemming from the No Child Left Behind Act (2001), also place tremendous pressure on teachers and schools to ensure their students perform well academically. As a result, teachers may be conflicted about the time they allocate for teaching core curricula versus SEL, both of which require dedication and constant practice.

Program quality in terms of delivery style alone is incomplete. It is unlikely that teachers will deliver SEL lessons with high quality if they are resistant to the program. To illustrate, teachers have varying levels of comfort with and commitment to incorporating

SEL lessons into academic curricula (Brackett, Reyes, Rivers, Elbertson, & Salovey, 2011), which play into how lessons are taught. Likewise, SEL programs are designed to create emotionally supportive climates for learning (Jennings & Greenberg, 2009); teachers with negative attitudes toward programming may undermine this program objective, rendering the program ineffective (Greenberg, Domitrovich, Graczyk, & Zins, 2005). Even if a teacher is implementing a program according to protocol, as judged by a trained observer, the attitude she or he has is integral to implementation quality.

### Gaps in the SEL Literature: The Effect of Training and Implementation

The interaction of training and implementation variables with SEL program outcomes has yet to be studied extensively. For example, a teacher may receive a great amount of training and deliver the recommended number of lessons, but do so with a poor attitude or unsatisfactorily. Moreover, a teacher may be highly competent when delivering the program, yet do so infrequently (cf. Gresham, 2009; Waltz et al., 1993). Most SEL program evaluations have not adequately assessed the relative effect of each of these variables on student outcomes. Past research mostly *describes* how the programs were implemented (Kallestad & Olweus, 2003; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Ransford, Greenberg, Domitrovich, Small, & Jacobson, 2009; Stead, Stradling, Macneil, Mackintosh, & Minty, 2007; Story et al., 2000), yet few published studies report which variables predict program outcomes, as might be outlined in a theory-of-change model (Rossi, Freeman, & Lipsey, 1999). Moreover, although a few studies examined training and implementation variables simultaneously (for a review see Dusenbury et al., 2003), their interactive effect on outcomes was not analyzed. In one study, the number of program lessons taught and the quality of program delivery independently predicted more positive teacher and observer ratings of student outcomes, but interactive effects were not examined (Conduct Problems

Research Group, 1999). The dearth of such studies makes it difficult to determine the critical ingredients of an intervention. For example, which affects student outcomes more: the amount of SEL program training a teacher receives, the number of SEL lessons he or she delivers, the quality with which those lessons are implemented, or some combination of the three?

### Assessing Training and Implementation of SEL Programs

One challenge in assessing variables surrounding implementation is in their operationalization. In general, implementation quality is more difficult to operationalize than training or dosage, which can be quantified (Mowbray, Holter, Teague, & Bybee, 2003). To illustrate, training information can be obtained from attendance records or sign-up sheets at trainings, and dosage can be defined as teacher reports of lessons taught. Quality indicators, however, often are more difficult to obtain. Indeed, in a review of over 500 studies from 1976 to 2006 that assessed implementation of prevention and health promotion programs for children and adolescents, assessments of quality rarely were included. When quality was assessed, it was defined and measured in various, often unsystematic ways (Durlak & DuPre, 2008).

How should implementation quality be assessed? Having teachers rate the quality of their delivery of lessons introduces potential biases as teachers tend to overestimate their levels of implementation (Sanetti & Kratochwill, 2009), which often are higher than ratings by trained observers (Lane, Kalberg, Bruhn, Mahoney, & Driscoll, 2008). Similarly, when trained observers rate teacher quality (e.g., Kam, Greenberg, & Walls, 2003), they may lack thorough knowledge of both the program and the teachers to make accurate assessments. According to Waltz and colleagues (1993), raters of quality should be "sufficiently experienced and sophisticated to understand the implications of the contextual variables described in the [program] manual" (p. 628). Program coaches, who are trained as

experts in the program, may be the most knowledgeable judges of implementation quality because their interactions with teachers are more frequent and more personal (e.g., they have discussed with teachers their apprehensions and helped them to devise strategies to overcome them).

### The Present Study

The present study extends previous research by examining associations and interaction effects of training, dosage, and implementation quality on intended student outcomes of social and emotional competence during the initial implementation phase (Fixsen et al., 2007), i.e., within the first year of adopting an SEL program. This study focuses on The RULER Approach (Brackett et al., 2011), which is grounded in a theoretical model that posits that acquiring the knowledge and skills associated with recognizing, understanding, labeling, expressing, and regulating emotion (i.e., the RULER skills) is critical to positive youth development (Brackett et al., 2009; Rivers & Brackett, 2011). RULER is an SEL program endorsed by the Collaborative for Academic, Social and Emotional Learning ([www.casel.org](http://www.casel.org)), an organization comprised of distinguished educators and researchers that provides national leadership on SEL. The positive effects of RULER on both social and emotional competencies and classroom climate are reported elsewhere (Brackett, Rivers, Reyes, & Salovey, 2010; Rivers, Brackett, Reyes, Elbertson, & Salovey, 2011).

In the present investigation, we hypothesized that training, dosage, and implementation quality (i.e., delivery and attitudes), and their interaction, would relate positively to student social and emotional competencies. Training was assessed with attendance records at training sessions; dosage included number of program lessons delivered; and implementation quality was measured by observer (coaches') ratings of both teacher attitudes toward programming and their delivery of the program. Student outcomes were obtained from student self-reports, performance assessments, and report cards. Data were analyzed

using a multilevel approach owing to their nested nature (Raudenbush & Bryk, 2002).

### Method

#### Participants

Participants included sixth-grade students ( $n = 812$ ) and their teachers ( $n = 28$ ) from 28 elementary schools in a large, urban Catholic school district located in the north-eastern United States. The schools were part of a randomized controlled trial (RCT) and the participating students and teachers were in schools assigned to use RULER (i.e., the program group). The full sample participating in the RCT consisted of 64 schools with 32 schools assigned randomly to the program group and 32 assigned randomly to the control group. (Note: Neither the individual participants nor the individual classrooms were assigned to groups. Schools were assigned randomly to either the program or control groups. Participating classrooms, teachers, and students were within these schools.) Four schools closed (two control and two program schools) during the course of the project. There were no differences in the demographic characteristics of the schools, teachers, or students between schools assigned to each group, except that the schools in the control group had larger enrollment numbers than those in the program group,  $t(62) = 2.82, p = .006$ . The current study focused exclusively on participants in the program group in the RCT for whom we had baseline data, which yielded 28 teachers and 812 students. We did not include participants in the control group.

On average, schools included 70% ( $SD = 33\%$ ) minority students (range = 5%–100%), and 24% ( $SD = 33\%$ ) of students received free or reduced-price lunch. Schools ranged in size from 178 to 656 students ( $M = 293.0, SD = 103.3$ ) with a student-teacher ratio ranging from about 11:1 to 25:1 ( $M = 17.9, SD = 3.4$ ). Participating schools varied in how they structured the school day for their sixth-grade students, such that at some schools, students received instruction from a single teacher for the entire day, and at others, students rotated through two or more

teachers throughout the day. The percentage of students in a school performing below average was based on the percentage of students with Levels 1 or 2 scores on the TerraNova Achievement Test (CTB/McGraw-Hill, 2002), which ranged from 8% to 86% ( $M = 32.7\%$ ,  $SD = 17.5\%$ ) in reading and from 0% to 67% ( $M = 22.5\%$ ,  $SD = 16.5\%$ ) in math.

Teachers were 84.4% female and identified themselves as 81.1% White/Caucasian, 9.1% Hispanic, and 9.1% Black/African American. These demographics resemble the racial and ethnic breakdown provided in 2010 U.S. census data: 72.4% White/Caucasian, 16.3% Hispanic, and 12.6% Black/African American (U.S. Census Bureau, 2011). Most of the teachers had either received their bachelor's degrees and/or were working toward a master's degrees (59.1%), and 31.8% had earned their master's degree or doctorates (9.1% missing these data). On average, teachers had been teaching for 13.1 year ( $SD = 10.6$ ), with an average of 10.3 years ( $SD = 9.4$ ) at their current school.

According to school records, students (48.6% female) were 27.0% White/Caucasian, 30.4% Black/African American, 22.0% Hispanic, 7.5% Asian/Pacific Islander, 3.7% multiracial, and 0.1% other race not mentioned (9.0% missing data). The composition of the student sample in this study was roughly similar to the racial and ethnic composition of the study's locale, although Caucasian students were underrepresented: 47.5% White/Caucasian, 28.4% Black/African American, 27.0% Hispanic, 11.1% Asian/Pacific Islander, and 4.9% multiracial (U.S. Census Bureau, n.d.).

### Design and Procedure

RULER targets all students and is designed to be implemented throughout a school district. This study focuses on the training and implementation of RULER within the program group at the end of the first year of programming. This study is embedded into a large RCT in which program schools participated in training and used RULER for 2 years

before schools in the control condition received the program.

The present study was divided into three waves of data collection: Wave 1 (March 2008) occurred prior to random assignment to condition and served as a baseline. Wave 2 occurred in the fall (September 2008) of the first programming year, as the program was being introduced; and Wave 3 occurred at the end of the first programming year (April 2009). Each wave of data collection lasted eight weeks. Students completed surveys and a performance test of emotion skills at each wave. Report cards were collected at Wave 3, the end of the first year of implementation, and contained data across all waves.

### Curriculum Model and Implementation

RULER is grounded in research showing that a core set of emotion skills, recognizing, understanding, labeling, expressing, and regulating emotion, is essential to positive youth development (Brackett, Rivers et al., 2010; Salovey & Mayer, 1990). First, adult stakeholders (i.e., superintendents, school leaders, teachers, and staff) attend two full-day (6 hr per day) trainings on the role of emotion skills in school success, the theory underlying RULER, and on how to foster an emotionally supportive learning environment through the teaching and personal use of program Anchor tools, including the Charter (a collaborative mission statement for the learning environment) and the Mood Meter (a tool for plotting emotions and mood states), among other tools (Brackett, Caruso, & Patti, 2008; Brackett, Caruso, & Stern, 2008). Teachers then attend a second training, which is one full day focusing on the instruction of the Feeling Words Curriculum (Brackett et al., 2011), a literacy-based SEL program that provides teachers with programmatic units that infuse into and complement existing curriculum, including English language arts. The Feeling Words Curriculum helps children to develop emotion skills through an in-depth exploration of terms like *commitment*, *elation*, and *empathy*. These "feeling word units" are the vehicles by which children learn to identify, evaluate, and under-



stand their own and others' thoughts, feelings, and behavior, understand the emotions and points of view of characters in stories, and develop strategies to manage emotions in real-life situations. In the training, teachers learn how to use the curricular units in alignment with their English language arts teaching. Each unit, which focuses on one feeling word, is comprised of five 10- to 20-min lessons. Teachers teach one unit, with its five lessons, across a 2-week period. For instance, for the unit on alienation, three lessons may be completed during the first week and the remaining two the second week (see Brackett et al., 2011, for a review of the units).

The implementation process involves support through coaching. Each teacher works with a certified coach who visits the classroom, models lessons, reviews lesson plans, provides constructive feedback, and offers solutions and resources to help the teacher deliver quality lessons.

In September of the first year of implementation, English language arts teachers in program schools attended the first 2-day training on using emotional literacy and the Anchor tools to enhance the learning environment. Approximately 1 month later, teachers attended the second full-day training on the Feeling Words Curriculum. Of the two available trainings sessions offered, teachers attended an average of 1.87 sessions ( $SD = 0.87$ ). Teachers in program schools then were paired with a certified RULER coach with whom they met for 45 min after a lesson was observed. Teachers received up to five coaching sessions, with an average of 4.02 sessions ( $SD = 0.92$ ).

In this study, five female coaches each worked with teachers in up to eight schools. Coaches underwent intensive training with the developers of RULER programming before working in schools. A senior RULER trainer supervised all coaches throughout the duration of the project through regular meetings conducted in person and on the phone, as well as through routine reviews of all written documentation about the coaching sessions (e.g., observation checklists and notes). Each week, coaches submitted to the head coach the writ-

ten documentation completed during and after each coaching session and classroom observation.

Teachers were asked to cover between 10 and 12 word units per year. Throughout the program year, teachers taught, on average, 7.20 word units ( $SD = 2.60$ , range 0–12 units), which yielded approximately 35 discrete emotional literacy lessons (i.e., 7 units  $\times$  5 lessons).

## Measures

**Training.** Training was measured by the number of training and coaching sessions teachers attended, as obtained from training attendance records. The maximum training value was 7, including two trainings and five coaching sessions.

**Dosage.** Dosage was assessed by the number of lessons taught (lessons), as obtained from teacher reports, at the end of the first year of programming (Wave 3). The maximum number of lessons a teacher could teach was 60 (12 units with 5 lessons in each).

**Implementation quality.** To measure implementation quality, each of the five coaches rated (both at the beginning and end of the school year; i.e., Waves 2 and 3) the extent to which teachers (a) demonstrated buy-in or an open attitude toward the program (1 = *very resistant*, 5 = *very open*) and (b) delivered RULER lessons with high quality (1 = *needs a lot of improvement*, 5 = *excellent*). During each coaching session, coaches reviewed forms that teachers completed for each feeling word unit. At Wave 2, coaches had met with teachers for at least two of the five coaching sessions to assess quality delivery. By Wave 3, the remaining coaching sessions (up to three) were completed. The correlations between openness to programming and delivery at the beginning and end of the year (Waves 2 and 3) were  $r$  values (26) = 0.63, and 0.62,  $p$  values  $< .001$ , respectively.

Because the measure of implementation quality incorporated two items assessed across two time points, a parsimonious measure of

**Table 1**  
**Assessing Implementation Quality: Teacher Quality Clusters at the Beginning and End of the Year (Waves 2 and 3)**

Cluster	Openness		Delivery	
	Wave 2	Wave 3	Wave 2	Wave 3
Low	1.79 (0.92)	3.33 (0.75)	1.17 (0.39)	2.58 (0.79)
Moderate	2.67 (0.82)	3.64 (0.70)	2.67 (0.49)	3.89 (0.58)
High	4.07 (0.80)	4.87 (0.23)	3.87 (0.74)	4.67 (0.49)

*Notes.* Based on the nature of cluster analysis, all clusters are significantly different from each other on all criterion variables.

quality was created by subjecting the indicators (i.e., openness and delivery) to cluster analysis to test whether distinct profiles of program quality existed. To select the optimal number of clusters, we first subjected the variables to an agglomerative hierarchical clustering procedure and then inspected the hierarchical tree diagram (Everitt, Landau, & Leese, 2001). A three-cluster solution proved to be optimal. The centroids from the hierarchical solution were entered as initial cluster centers in the final *k*-means iterative procedure. The three clusters that emerged were labeled: low-quality implementers (i.e., teachers who were initially very resistant to the program and delivered it poorly but became open to the program by the end of the school year;  $n = 7$ ), moderate-quality implementers (i.e., teachers who were moderate in their attitudes toward the program and in their delivery of the program from beginning to end;  $n = 12$ ), and high-quality implementers (i.e., teachers who were consistently open to and delivered the program very well from beginning to end;  $n = 9$ ). There was no evidence to support a profile of teachers who were resistant to programming but high in delivery, nor was there evidence to support a profile of teachers who were open to programming but low in delivery. Table 1 summarizes the means and standard deviations for each cluster.

**Social and emotional competence.** Multiple methods were used to assess stu-

dents' social and emotional competence. Table 2 summarizes the means, standard deviations, reliabilities, and intercorrelations among these variables at Wave 3.

First, students' report cards contained three items that reflected social competence (i.e., respects the rights of others, interacts appropriately, and complies with school policies) using a scale where 1 = *unsatisfactory*, 2 = *needs improvement*, 3 = *satisfactory*, 4 = *good*, and 5 = *excellent*. (Grades in these three areas were not necessarily given by the English language arts teachers [those who conducted the RULER lessons], depending on the structure of the students' school day and whether they were instructed by multiple teachers.) A composite score was created for the three items by adding the scores.

Social problem-solving skills were assessed with the Conflict Resolution Skill subscale of the Elementary Student Questionnaire of the Child Development Project (Developmental Studies Center, 2000). This eight-item scale presents students with four peer-conflict scenarios (two items per scenario). For each item, students selected one response from a multiple-choice list. Higher scores reflected the selection of more collaborative and compromise-centered responses to conflict, whereas lower scores reflected more aggressive or evasive responses to conflict. Students receiving a school-based program aimed at promoting their social, ethical, and intellectual



**Table 2**  
**Intercorrelations, Means, Standard Deviations, and Reliability Coefficients of**  
**Students' End-of-Year (Wave 3) Social and Emotional Competencies**  
**(N = 812)**

	1	2	3
1. Emotional Literacy	—		
2. Social Problem Solving	.28	—	
3. Social Competence	.24	.32	—
<i>M</i>	105.52	2.71	4.08
<i>SD</i>	12.84	0.97	0.86
Range	56.86–127.26	1.00–4.50	1.00–5.00
Cronbach's $\alpha$	.87	.79	.96

*Note.* All variables are significant at  $p < .001$ .

development had higher scores than a control group of students on this scale (Schaps, Battistich, & Solomon, 2004).

Emotional literacy was measured with the Strategic Emotional Intelligence component of the Mayer-Salovey-Caruso Emotional Intelligence Test—Youth Version (MSCEIT-YV; Mayer, Salovey, & Caruso, in press), which is appropriate for children between 11 and 17 years old. The test assesses the extent to which respondents understand emotional information and use that information for planning and self-management. Scores are calculated by combining two subtest scores: emotion understanding and emotion regulation. There are 23 multiple-choice items on the understanding subtest, which assesses the ability to identify both the definitions and causes of emotions. The regulation branch asks respondents to evaluate the effectiveness of several actions in making an individual feel a certain way. Respondents indicate the extent to which the chosen action would help the target character achieve a specified goal using a 5-point scale (1 = *not at all helpful*, 5 = *very helpful*). This section describes six situations, each of which has three alternatives, for a total of 18 items. Performance on the test is calculated by veridical scoring, which is described extensively in the technical manual (Mayer, Caruso, & Salovey, 2005). To explain briefly: emotion experts consulted the empiri-

cal literature to determine independently the best responses to each test item and then agreed on the best responses. Scores on the MSCEIT-YV are interpreted similarly to IQ scores with a mean of 100 and standard deviation of 15. Higher performance scores on understanding and regulation correlate positively with psychosocial functioning (Rivers, Brackett, & Salovey, 2008) and with standardized achievement test scores in reading (Peters, Kranzler, & Rossen, 2009).

**Teaching efficacy.** Teaching efficacy was assessed with the five-item Adaptive Efficacy Scale (Search Institute, 2006), which measures teachers' beliefs in their ability to modify their teaching methods, when needed, to have a positive effect on students. Teachers rated the extent to which they agreed or disagreed with each statement (e.g., "When a student has trouble learning something new, I try a new strategy"; "I am certain that I am making a positive difference in the lives of students") using a 5-point Likert scale (1 = *strongly disagree*; 5 = *strongly agree*). Cronbach's  $\alpha$  values were .75 and .78 for beginning- and end-of-year teaching efficacy, respectively.

#### **Analytic Strategy**

The main and interaction effects of training, dosage, and implementation quality

on students' year-end social and emotional competencies were examined, controlling for student demographics and baseline scores.

**Missing data.** Of the 812 students, 173 had missing data, leaving 639 students with any data on the social problem-solving skills and social competence indicators. Missing data were treated with multiple imputation procedures in NORM (Schafer, 2000), which created five complete data files. Multilevel analyses were conducted for each of the five imputed data files and coefficients. Standard errors resulting from each analysis were averaged to provide estimates of the associations among our variables of interest (Schafer, 1999). Furthermore, return rates were lower for the MSCEIT-YV than the other assessments. Of 812 students, 425 had no MSCEIT data at either Waves 2 or 3, leaving only 387 students with MSCEIT data from Wave 1 and either Wave 2 or 3. Our imputations were based on data from these waves for these 387 students. The lower return rates for the MSCEIT probably could be attributed to the fact that teachers (and not the research team) administered this test. Separate imputations were conducted for emotional literacy scores because of low return rates. Comparable results were obtained from both complete and imputed data sets.

**Primary analyses.** Because of the nested design, we analyzed data using hierarchical linear modeling with full-information maximum-likelihood estimation with separate models for each student-level outcome. We nested students (Level 1) within teachers (Level 2) because we were interested in teachers' implementation of RULER. A three-level hierarchical model (students nested in teachers nested in schools) was unnecessary because there was a 1:1 correspondence between teachers and schools. To analyze the effect of training and implementation variables on our target outcomes, we ran two models: a main effects model and an interaction effects (Training  $\times$  Dosage  $\times$  Implementation Quality) model. The first model examined the direct relationships between training, dosage,

and quality with student outcomes (Model 1). The second model tested interaction or moderation effects, crossing training, dosage, and implementation quality indicators (Model 2). To determine whether Model 2 contributed incrementally to the explanation of the outcome variable, we examined the change in  $R^2$  by testing the change in  $\chi^2$  ( $\Delta\chi^2$ ).

Finally, we calculated effect sizes using the formula:

$$\delta = \frac{\gamma}{\sqrt{\tau_{00} + \sigma^2}}$$

where  $\gamma$  is the association between the predictor and outcome variables, and the denominator is the SD of the outcome variable, where  $\tau_{00}$  and  $\sigma^2$  are the between- and within-groups variances, respectively, from the unconditional model. Interpretation of  $\delta$  is similar to Cohen's (1988)  $d$ : 0.2 is small, 0.5 is moderate, and 0.8 is large.

## Results

There were no main effects of training, dosage, or implementation quality on the student outcome variables at the end of the year, after controlling for baseline status (Model 1); however, numerous interaction effects were detected (Model 2), as Table 3 shows. Because quality indicators were coded as dummy variables, we chose the reference variable to be low-quality implementers. All analyses, therefore, are in comparison to this group. Moreover, all student outcomes pertain to year-end status (Wave 3) after controlling for baseline status (Wave 1).

Among high-quality implementers, those who taught more feeling word units had students with higher scores on all three student outcomes: social competence ( $t = 3.83$ , effect size [ES] = 0.23), social problem solving ( $t = 5.96$ , ES = 0.19), and emotional literacy ( $t = 5.47$ , ES = 0.16). High-quality implementers who attended more training also had students who scored higher on the measures of social problem solving ( $t = 2.58$ , ES = 0.28), emotional literacy ( $t = 1.82$ , ES = 0.34), and social competence ( $t = 1.78$ , ES = 0.24);

**Table 3**  
**Training, Dosage, and Implementation Quality: Main and Interaction Effects**  
**on Year-End Student Outcomes (Wave 3)**

	Students' Social and Emotional Competence Year-End Scores		
	Emotional Literacy ( <i>n</i> = 387)	Social Problem-Solving Skills ( <i>n</i> = 812)	Social Competence ( <i>n</i> = 812)
<b>Model 1: Main Effects</b>			
ICC <sup>a</sup> %	8.62	11.25	35.86
Intercept	107.19 (2.06)***	2.81 (0.18)***	4.60 (0.19)***
<i>Level 1 (Student)</i>			
Black	0.42 (1.19)	-0.24 (0.14)	-0.11 (0.09)
Hispanic	0.36 (1.45)	-0.19 (0.13)	-0.12 (0.06)
Asian	3.27 (2.27)	0.04 (0.16)	-0.04 (0.09)
Other race	-3.21 (5.83)	0.17 (0.28)	0.32 (0.11)**
Male	-2.04 (1.06)	-0.08 (0.08)	-0.23 (0.07)**
Baseline score <sup>b</sup>	0.62 (0.05)***	0.52 (0.04)***	0.46 (0.06)***
<i>Level 2 (Teachers)</i>			
Training	-0.65 (1.28)	0.03 (0.06)	0.09 (0.07)
Dosage	-0.54 (0.48)	-0.01 (0.02)	0.01 (0.03)
Implementation Quality <sup>c</sup>			
Moderate	0.69 (2.50)	0.05 (0.18)	-0.36 (0.23)
High	0.78 (2.70)	0.14 (0.16)	-0.34 (0.20)
<b>Model 2: Interaction Effects<sup>d</sup></b>			
Intercept	102.71 (1.62)***	2.69 (0.07)***	4.48 (0.10)***
Training × Low	-7.01 (1.47)***	-0.25 (0.07)**	-0.07 (0.11)
Training × Moderate	8.35 (2.50)**	0.18 (0.15)	-0.04 (0.25)
Training × High	4.24 (2.33)	0.27 (0.15)*	0.21 (0.12)
Dosage × Low	-1.37 (0.25)***	-0.13 (0.02)***	-0.18 (0.04)***
Dosage × Moderate	-0.27 (0.41)	0.11 (0.04)**	0.26 (0.05)***
Dosage × High	2.03 (0.37)***	0.19 (0.03)***	0.20 (0.05)**
Model 1 <i>R</i> <sup>2</sup>	39.83	50.66	46.72
Model 2 <i>R</i> <sup>2</sup>	87.00	86.01	69.75
Δ <i>χ</i> <sup>2</sup> (4)	16.20**	14.93**	12.91*

Note. Estimated means (standard errors) reported.

<sup>a</sup> ICC = Intraclass correlation coefficient; <sup>b</sup> Baseline (Wave 1) score of corresponding outcome variable assessed; <sup>c</sup> Low is the reference group; <sup>d</sup> Truncated output.

\* *p* < .05, \*\* *p* < .01, \*\*\* *p* < .001.

however, the latter two findings did not reach conventional levels of statistical significance (*p* < .10).

Among moderate-quality implementers, those who attended more training had students with higher emotional literacy scores (*t* = 3.34, *ES* = 0.68). Moderate-quality implementers who taught more feeling word

units also had students with higher scores on both the social competence (*t* = 4.86, *ES* = 0.29) and social problem-solving (*t* = 3.11, *ES* = 0.12) assessments.

A different pattern was found for teachers classified as low-quality implementers. Teachers in this cluster who attended more training had students with lower scores on

both the social problem-solving assessment ( $t = -3.47$ ,  $ES = 0.25$ ) and emotional literacy test ( $t = -4.78$ ,  $ES = 0.57$ ). Moreover, low-quality implementers who taught more feeling word units had students with lower scores on all outcomes: social competence ( $t = -4.65$ ,  $ES = 0.20$ ), social problem solving ( $t = -6.03$ ,  $ES = 0.13$ ), and emotional literacy ( $t = -5.46$ ,  $ES = 0.11$ ).

To investigate possible explanations for the disparate findings among low-, moderate-, and high-quality implementers, we ran post hoc analyses to examine whether differences in teaching efficacy existed among teachers in each cluster. The means for low-, moderate-, and high-quality implementers in teaching efficacy at Wave 3 were as follows: 3.84 ( $SD = 0.22$ ), 4.38 ( $SD = 0.34$ ), and 4.49 ( $SD = 0.54$ ), respectively. Differences among the teacher clusters were significant,  $F(2, 20) = 4.13$ ,  $p = .034$ . Bonferroni-corrected post hoc analyses revealed low-quality implementers scored lower in teaching efficacy than high-quality implementers ( $p = .037$ ).

In summary, there were no main effects of training, dosage, or implementation quality on student outcomes. However, several interaction effects emerged, such that student outcomes were affected by a combination of the number of trainings teachers attended and of lessons they taught and the quality with which these teachers implemented the program.

## Discussion

Although SEL programs have positively affected key developmental outcomes among youth (Durlak et al., 2011), the majority of past investigations did not address the relative importance of training and implementation variables on targeted program outcomes. In this study, we examined whether the amount of training teachers received, the number of lessons students received, and the quality of delivery for one SEL program, RULER, were associated with students' social and emotional competencies. Similar to others' investigations (Hopkins et al., 1988; Kam et al., 2003), we found no main effects for our indicators of training and implementation on expected out-

comes. However, we did find numerous significant interactions. Higher attendance at trainings and coaching sessions for moderate- and high-quality implementers, but not low-quality implementers, resulted in students with higher scores on indices of social problem-solving skills and emotional literacy. For moderate- and high-quality implementers but not for low-quality implementers, teaching more lessons also resulted in better student outcomes.

The unfavorable effects of more training among low-quality implementers may be partly explained by teaching efficacy. Post hoc analyses revealed that low-quality implementers were less efficacious about their general teaching practices than high-quality implementers. Low-quality implementers may not have been prepared to deliver SEL lessons without first becoming more confident in their general teaching practices (cf. Buchanan et al., 2009). These findings add to the growing research base on factors that may contribute to effective SEL programming (Collaborative for Academic, Social, and Emotional Learning, 2003; Gager & Elias, 1997; Lewis et al., 1990).

Analyzing training as the number of training and coaching sessions attended and dosage as the number of program lessons taught (i.e., feeling word units) was highly informative. For example, we found that among moderate- and high-quality implementers, but not low-quality implementers, the number of feeling word units taught had more significant and positive associations with student outcomes than the number of trainings attended, suggesting that active implementation may be more important than mere attendance at training sessions. Certainly, professional development is critical to learning the instructional strategies of RULER or any SEL program, but it may not be sufficient for affecting outcomes. What appeared to matter more was how training and coaching sessions were actualized in the classroom (i.e., through quality instruction). Assessing quality in terms of both attitudes and delivery, which have been associated positively in other investigations (Botvin et al., 1989), sheds light on how

teachers implement the program with varying levels of openness and skill.

### **Implications for Teacher Training and Professional Development**

When new programs are introduced in schools during the installation and initial implementation stages, there usually exists a high degree of variability in terms of buy-in or openness to programming (Fixsen et al., 2007). Implementing SEL programs can be difficult for teachers who are balancing their time between meeting traditional academic requirements and the new demands of SEL programs. Indeed, asking teachers to integrate SEL into their already busy schedules can be physically, mentally, and emotionally taxing (Ransford et al., 2009). Our findings revealed that having teachers with low levels of openness (program buy-in) and delivery, but who either attended more trainings (including coaching sessions) or conducted more program lessons, resulted in lower levels of positive social and emotional outcomes among students. One strategy for addressing this may be for schools and SEL program providers to focus training efforts during initial implementation on teachers with an open attitude toward programming. Once these teachers have been trained and the program is moving toward full implementation, teachers who report high resistance to programming can begin their training, as concerted efforts are made by program providers and school administrators to increase their buy-in to the program.

There are various reasons that teachers may be resistant and lack buy-in to SEL programs. Effective programming approaches will acknowledge these attitudes, devote attention toward addressing them, and incorporate critical feedback from resistant teachers into program content and instructional strategies (Greenberg et al., 2005). Moreover, additional program-related information, support, and resources could be offered to target resistant teachers. For instance, these teachers could be provided with: (1) more empirical rationale for and real-life examples of the program's positive effect on students; (2) emphasis on the

match between program goals and the schools' or districts' goals, values, policies, and philosophies; (3) additional instructional support from their principals or from program coaches to improve their program-specific or general teaching efficacy, if necessary; and (4) connections with teachers who have experienced success with the program, in particular those who were resistant at first themselves and whose attitudes toward programming were transformed. Until initially resistant teachers are more supportive of the program, they should be advised to conduct fewer lessons, with close monitoring and support from a coach.

Although RULER, like many SEL programs, is designed to integrate into existing school curricula, without quality training and ongoing support, its sustainability will likely be at risk (Fagan & Mihalic, 2003; Gager & Elias, 1997; Gottfredson & Gottfredson, 2002). In the past, many schools have applied the "train-and-hope" model (Stokes & Baer, 1977) to teacher professional development; some schools rely solely on the purchase of "kits" that require no additional training. Teaching SEL effectively requires ongoing training, coaching, and monitoring, each of which is critical to successful implementation (Fagan & Mihalic, 2003; Fixsen et al., 2009; Fixsen, Naoom, Blase, Friedman, & Wallace, 2005; Lewis et al., 1990). Coaching, for instance, provides the opportunity to give teachers immediate feedback on all aspects of program delivery (Strother, 1989). Because many schools employ school psychologists, counselors, and social workers who often are asked to coordinate SEL initiatives or cofacilitate the teaching of SEL, our findings have many implications for these stakeholders who play a key consultative role to SEL program providers, school administrators, and teachers.

### **Strengths, Limitations, and Future Directions**

A primary strength of this study was the multimethod assessment of constructs. Training and implementation variables were assessed with self-reports, attendance records,

and ratings from coaches. Student outcomes were assessed with self-ratings, teacher ratings, and a performance assessment tool. The differential interaction effects found between training, dosage, and implementation quality on student outcomes highlight the intricacies of identifying the key ingredients of effective SEL programming.

One area of future research is how to balance capitalizing on available, existing school data with the need to collect additional data. For instance, in the current study, the social competence items from the report card were selected because they were ratings with which teachers were already familiar and which could be gathered for all students across schools without missing data. However, we acknowledge that this measure is not ideal. For one, we do not know the factors that teachers used to assign scores to each student. In the case of preexisting implementation data that schools have on file, missing data often are an issue. The problem here is determining whether implementation data are missing systematically or at random. To illustrate: (1) are program noncompliers more likely to have missing data than program compliers, or (2) are program noncompliers just as likely to have missing data as compliers? How then can researchers obtain the most essential data available from teachers (or even schools) who may be resistant to programming, data collection, or both? Archival records such as attendance sheets, lesson plans, report cards, and classroom observations are important in order to obtain as much complete data as possible. The drawback with working with these types of archival data are that they usually are not standardized and likely are influenced by the perceptions and biases of the staff recording the information. Implementation data are particularly difficult to assess as implementation processes vary considerably. Different schools implement programs at different rates and in different ways. Future research could compare the use of various forms of archival data with that of more standardized assessments in order to identify best practices for collecting data related to implementation and related outcomes.

Another area ripe for investigation is the assessment of coaching quality and style. Although this study employed coaches' ratings of teacher implementation quality, it did not employ systematic assessments of the quality or style of each coach or the potential biases of their observational ratings, which are not unlikely, given they are invested in the positive outcomes of their efforts and have frequent personal interactions with the teachers they rated. Even though coaches received extensive training and were monitored closely, assessing their implementation of the coaching protocol and the objectiveness of their observational assessments is important for future research. The quality of coaching that a teacher receives could affect that teacher's attitudes and approaches to implementation. Similarly, the biases in the coach's observations could influence how the teacher is categorized with regard to implementation quality. Although an investigation of these phenomena was beyond the scope of the current project, it would be a valuable contribution to future implementation research.

Examining teacher learning outcomes achieved during training and coaching sessions also may be important for determining the key ingredients to effective interventions. It is likely that the quality of teacher trainings as well as the differential effect of the same training on individual teacher learning would influence student outcomes. Thus, future research and practice should include some measure of what skills and knowledge teachers gleaned from training and coaching.

The role of teachers' social and emotional competencies in the successful delivery of SEL lessons also was not studied, but offers another area for future investigation. It is likely that these competencies are associated with multiple facets of program implementation, including attitudes and delivery (Brackett et al., 2009; Durlak & DuPre, 2008). For example, once specific competencies are identified to be associated with high-quality implementation, the teaching of such competencies could be integrated into teacher training. Such competencies also may serve as moderators of implementation quality on



student outcomes, or as mediators such that an SEL program may shift the skill set of teachers, making them more effective in the classroom.

Finally, this study focused exclusively on participants assigned to the program group in the RCT; we did not include participants from the control group. Ideally, implementation is analyzed systematically in both program and control groups. For this particular program, the inclusion of a control group would facilitate the building of an evidence base for establishing the effectiveness of the RULER intervention. In general, the inclusion of a control group would allow for a more advanced understanding of the true effect of SEL training and its implementation on student outcomes (see Cordray, 2000). One way to account for this variation is to create implementation measures that capture the essential elements of both SEL programs and related, standard teaching practices, to administer them to both conditions, and then to use these data as potential moderating variables in analyses (O'Donnell & Lynch, 2008). This approach, however, would require careful monitoring of both the program and control conditions, which is an added research cost.

### Conclusion

Teachers play an important role in SEL programming, as they are the intermediaries between students and the program. The adoption of SEL programs can be met with either enthusiasm or resistance among teachers. The components of SEL programming framework used in this study, which was composed of training, dosage, and implementation quality (attitudes and delivery), proved useful in evaluating the success of RULER, one of many promising SEL programs. Our findings suggest that mere delivery of SEL lessons is not sufficient for cultivating benefits for students. Lessons must be taught frequently and delivered with quality. Further research is warranted on the many facets of program implementation and

their associations with the effectiveness of SEL programs.

### References

- Aber, J. L., Jones, S. M., Brown, J. L., Chaudry, N., & Samples, F. (1998). Resolving conflict creatively: Evaluating the developmental effects of a school-based violence prevention program in neighborhood and classroom context. *Development and Psychopathology*, 10, 187–213. doi:10.1017/s0954579498001576
- August, G. J., Bloomquist, M. L., Lee, S. S., Realmuto, G. M., & Hekimer, J. M. (2006). Can evidence-based prevention programs be sustained in community practice settings? The Early Risers' advanced-stage effectiveness trial. *Prevention Science*, 7, 151–165. doi: 10.1007/s11121-005-0024-z
- Botvin, G. J., Dusenbury, L., Baker, E., & James-Ortiz, S. (1989). A skills training approach to smoking prevention among Hispanic youth. *Journal of Behavioral Medicine*, 12, 279–296. doi:10.1007/bf00844872
- Brackett, M. A., Caruso, D. R., & Patti, J. (2008). *Emotional literacy for school leaders*. New Haven, CT: RULER Group.
- Brackett, M. A., Caruso, D. R., & Stern, R. (2008). *Emotional literacy for educators*. New Haven, CT: RULER Group.
- Brackett, M. A., Kremenitzer, J. P., Maurer, M., Carpenter, M., Rivers, S. E., & Elbertson, N. (2011). *Creating emotionally literate classrooms: An introduction to The RULER Approach to social and emotional learning*. Port Chester, NY: National Professional Resources.
- Brackett, M. A., Patti, J., Stern, R., Rivers, S. E., Elbertson, N. A., Chisholm, C., et al. (2009). A sustainable, skill-based approach to building emotionally literate schools. In M. Hughes, H. L. Thompson, & J. B. Terrell (Eds.), *Handbook for developing emotional and social intelligence: Best practices, case studies, and strategies* (pp. 329–358). San Francisco, CA: Pfeiffer/John Wiley & Sons.
- Brackett, M. A., Reyes, M. R., Rivers, S. E., Elbertson, N. A., & Salovey, P. (2011). Assessing teachers' beliefs about social and emotional learning. *Journal of Psychoeducational Assessment*. doi: 10.1177/0734282911424879
- Brackett, M. A., Rivers, S. E., Reyes, M. R., & Salovey, P. (2010). Enhancing academic performance and social and emotional competence with the RULER Feeling Words Curriculum. *Learning and Individual Differences*. doi:10.1016/j.lindif.2010.10.002
- Buchanan, R., Gueldner, B. A., Tran, O. K., & Merrell, K. W. (2009). Social and emotional learning in classrooms: A survey of teachers' knowledge, perceptions, and practices. *Journal of Applied School Psychology*, 25(2), 187–203. doi:10.1080/15377900802487078
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Collaborative for Academic, Social, & Emotional Learning. (2003). *Safe and sound: An educational leader's guide to evidence-based social and emotional learning (SEL) programs*. Chicago, IL: Author.
- Conduct Problems Research Group. (1999). Initial impact of the fast track prevention trial for conduct problems: II. Classroom effects. *Journal of Consulting and Clin-*

- ical Psychology, 67(5), 648–657. doi:10.1037/0022-006X.67.5.648
- Conduct Problems Research Group. (2011). The effects of the Fast Track preventive intervention on the development of conduct disorder across childhood. *Child Development, 82*(1), 331–345. doi:10.1111/j.1467-8624.2010.01558.x
- Connell, D. B., Turner, R. R., & Mason, E. F. (1985). Summary of findings of the school health education evaluation: Health promotion effectiveness, implementation, and costs. *Journal of School Health, 55*, 316–321.
- Cordray, D. S. (2000). Enhancing the scope of experimental inquiry in intervention studies. *Crime & Delinquency, 46*, 401–424.
- CTB/McGraw-Hill. (2002). *TerraNova* (2nd ed.). Monterey, CA: Author.
- Dane, A. V., & Schneider, B. H. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? *Clinical Psychology Review, 18*, 23–45. doi:10.1016/S0272-7358(97)00043-3
- Developmental Studies Center. (1988–2005). *Student questionnaire, Child Development Project (Elementary school version)*. Oakland, CA: Developmental Studies Center.
- Domitrovich, C., Cortes, R., & Greenberg, M. (2007). Improving young children's social and emotional competence: A randomized trial of the preschool "PATHS" curriculum. *The Journal of Primary Prevention, 28*(2), 67–91.
- Durlak, J. A., & DuPre, E. P. (2008). Implementation matters: A review of research on the influence of implementation on program outcomes and the factors affecting implementation. *American Journal of Community Psychology, 41*, 327–350. doi:10.1007/s10464-008-9165-0
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development, 82*, 405–432. doi:10.1111/j.1467-8624.2010.01564.x
- Dusenbury, M. L., Brannigan, R., Falco, M., & Hansen, W. B. (2003). A review of research on fidelity of implementation: Implications for drug abuse prevention in school settings. *Health Education Research, 18*, 237–256. doi:10.1093/her/18.2.237
- Elbertson, N. A., Brackett, M. A., & Weissberg, R. P. (2009). School-based social and emotional learning (SEL) programming: Current perspectives. In A. Hargreaves, A. Lieberman, M. Fullan, & D. Hopkins (Eds.), *Second international handbook of educational change* (Vol. 23, pp. 1017–1032). Dordrecht: Springer Netherlands.
- Elias, M. J., Bruene-Butler, L., Blum, L., & Schuyler, T. (2000). Voices from the field: Identifying and overcoming roadblocks to carrying out programs in social and emotional learning/emotional intelligence. *Journal of Educational & Psychological Consultation, 11*, 253–272. doi:10.1207/s1532768Xjepc1102\_06
- Everitt, B. S., Landau, S., & Leese, M. (2001). *Cluster analysis*. (4th ed.). London: Arnold.
- Fagan, A. A., & Mihalic, S. (2003). Strategies for enhancing the adoption of school-based prevention programs: Lessons learned from the blueprints for violence prevention replications of the Life Skills Training program. *Journal of Community Psychology, 31*, 235–253. doi:10.1002/jcop.10045
- Fixsen, D. L., Blase, K. A., Naoom, S. F., & Wallace, F. (2009). Core implementation components. *Research on Social Work Practice, 19*, 531–540. doi:10.1177/1049731509335549
- Fixsen, D. L., Naoom, S. F., Blase, K. A., Friedman, R. M., & Wallace, F. (2005). *Implementation research: A synthesis of the literature* (FMHI Publication #231). Tampa: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.
- Fixsen, D. L., Naoom, S. F., Blase, K. A., & Wallace, F. (2007). Implementation: The missing link between research and practice. *APSAAC Advisor, 19*(1 & 2), 4–11.
- Gager, P. J., & Elias, M. J. (1997). Implementing prevention programs in high-risk environments: Application of the resiliency paradigm. *American Journal of Orthopsychiatry, 67*, 363–373. doi:10.1037/h0080239
- Gottfredson, D. C., & Gottfredson, G. D. (2002). Quality of school-based prevention programs: Results from a national survey. *Journal of Research in Crime and Delinquency, 39*, 3–35.
- Greenberg, M. T., Domitrovich, C. E., Graczyk, P. A., & Zins, J. E. (2005). *The study of implementation in school-based preventive interventions: Theory, research, and practice (Volume 3)*. Rockville, MD: Center for Mental Health Services, Substance Abuse and Mental Health Services Administration.
- Gresham, F. M. (2009). Evolution of the treatment integrity concept: Current status and future directions. *School Psychology Review, 38*, 533–540.
- Han, S. S., & Weiss, B. (2005). Sustainability of teacher implementation of school-based mental health programs. *Journal of Abnormal Child Psychology, 33*, 665–679.
- Hopkins, R. H., Mauss, A. L., Kearney, K. A., & Weisheit, R. A. (1988). Comprehensive evaluation of a model alcohol education curriculum. *Journal of Studies on Alcohol, 49*, 38–50.
- James, S., Reddy, P., Ruiter, R. A. C., McCauley, A., & van den Borne, B. (2006). The impact of an HIV and AIDS life skills program on secondary school students in KwaZulu-natal, south Africa. *AIDS Education and Prevention, 18*, 281–294. doi:10.1521/aeap.2006.18.4.281
- Jennings, P. A., & Greenberg, M. T. (2009). The prosocial classroom: Teacher social and emotional competence in relation to student and classroom outcomes. *Review of Educational Research, 79*, 491–525. doi:10.3102/0034654308325693
- Jones, S. M., Brown, J. L., & Aber, J. L. (2011). Two-year impacts of a universal school-based social-emotional and literacy intervention: An experiment in translational developmental research. *Child Development, 82*, 533–554.
- Joyce, B., & Showers, B. (2002). *Student achievement through staff development* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Kallestad, J. H., & Olweus, D. (2003). Predicting teachers' and schools' implementation of the Olweus Bullying Prevention Program: A multilevel study. *Prevention & Treatment, 6*, article 21. doi:10.1037/1522-3736.6.1.621a



- Kam, C.-M., Greenberg, M. T., & Walls, C. T. (2003). Examining the role of implementation quality in school-based prevention using the PATHS curriculum. *Prevention Science*, 4, 55-63. doi:10.1023/a:1021786811186
- Lane, K. L., Kulberg, J. R., Bruhn, A. L., Mahoney, M. E., & Driscoll, S. A. (2008). Primary prevention programs at the elementary level: Issues of treatment integrity, systematic screening, and reinforcement. *Education & Treatment of Children*, 31, 465-494. doi:10.1353/etc.0.0033
- Lewis, C., Battistich, V., & Schaps, E. (1990). School-based primary prevention: What is an effective program? *New Directions for Child and Adolescent Development*, Winter, 50, 35-59.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2005). *The Mayer-Salovey-Caruso Emotional Intelligence Test—Youth Version (MSCEIT-YV), Research Version*. Toronto, Canada: Multi Health Systems.
- Mayer, J. D., Salovey, P., & Caruso, D. R. (in press). *Mayer-Salovey-Caruso Emotional Intelligence Test: Youth Version (MSCEIT: YV): Item booklet*. Toronto, Canada: Multi-Health Systems.
- Moskowitz, J. M., Schaps, E., & Malvin, J. H. (1982). Process and outcome evaluation in primary prevention: The Magic Circle program. *Evaluation Review*, 6, 775-788. doi:10.1177/0193841x8200600604
- Mowbray, C. T., Holter, M. C., Teague, G. B., & Bybee, D. (2003). Fidelity criteria: Development, measurement, and validation. *The American Journal of Evaluation*, 24, 315-340. doi:10.1016/s1098-2140(03)00057-2
- No Child Left Behind Act of 2001, 20 U.S.C. § 6319 (2001).
- O'Donnell, C. L., & Lynch, S. J. (2008). *Fidelity of implementation to instructional strategies as a moderator of science curriculum effectiveness*. Paper presented at the annual meeting of the American Educational Research Association, New York.
- Penuel, W. R., Fishman, B. J., Yamaguchi, R., & Gallagher, L. P. (2007). What makes professional development effective? Strategies that foster curriculum implementation. *American Educational Research Journal*, 44, 921-958.
- Peters, C., Kranzler, J. H., & Rossen, E. (2009). Validity of the Mayer-Salovey-Caruso Emotional Intelligence Test: Youth Version—Research Edition. *Canadian Journal of School Psychology*, 24(1), 76-81. doi:10.1177/0829573508329822
- Ransford, C. R., Greenberg, M. T., Domitrovich, C. E., Small, M., & Jacobson, L. (2009). The role of teachers' psychological experiences and perceptions of curriculum supports on the implementation of a social and emotional learning curriculum. *School Psychology Review*, 38, 510-532.
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods*. (2nd ed.). Thousand Oaks, CA: Sage.
- Rivers, S. E., & Brackett, M. A. (2011). Achieving standards in the English language arts (and more) using The RULER Approach to social and emotional learning. *Reading & Writing Quarterly*, 27, 75-100.
- Rivers, S. E., Brackett, M. A., Reyes, M. R., Elbertson, N., & Salovey, P. (2011). *Improving the social and emotional climate of classrooms with emotional literacy skill building: A clustered randomized controlled trial testing The RULER Approach*. Manuscript submitted for publication.
- Rivers, S. E., Brackett, M. A., & Salovey, P. (2008). Measuring emotional intelligence as a mental ability in adults and children. In G. J. Boyle, G. Matthews, & D. H. Saklofske (Eds.), *The SAGE handbook of personality theory and assessment, Vol. 2, Personality measurement and testing* (pp. 440-460). Thousand Oaks, CA: Sage.
- Rossi, P. H., Freeman, H. E., & Lipsey, M. W. (1999). *Evaluation: A systematic approach* (6th ed.). Thousand Oaks, CA: Sage.
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition, and Personality*, 9, 185-211.
- Sanetti, L. M. H., & Kratochwill, T. R. (2009). Toward developing a science of treatment integrity: Introduction to the special series. *School Psychology Review*, 38, 445-459.
- Schafer, J. L. (1999). Multiple imputation: A primer. *Statistical Methods in Medical Research*, 8, 3-15.
- Schafer, J. L. (2000). *NORM Version 2.03*. Retrieved June 27, 2008, from <http://www.stat.psu.edu/~jls/misoftwa.html>
- Schaps, E., Battistich, V., & Solomon, D. (2004). Community in school as key to student growth: Findings from the Child Development Project. In J. E. Zins, R. P. Weissberg, M. C. Wang, & H. J. Walberg (Eds.), *Building academic success on social and emotional learning: What does the research say?* (pp. 189-205). New York: Teachers College Press.
- Search Institute. (2006). *Creating a great place to learn survey: A survey of school climate. Technical manual*. Minneapolis: MN: Search Institute.
- Stead, M., Stradling, R., Macneil, M., Mackintosh, A. M., & Minty, S. (2007). Implementation evaluation of the Blueprint multi-component drug prevention programme: Fidelity of school component delivery. *Drug & Alcohol Review*, 26, 653-664. doi:10.1080/09595230701613809
- Stokes, T. F., & Baer, D. M. (1977). An implicit technology of generalization. *Journal of Applied Behavior Analysis*, 10, 349-367. doi:10.1901/jaba.1977.10-349
- Story, M., Mays, R. W., Bishop, D. B., Perry, C. L., Taylor, G., Smyth, M., et al. (2000). 5-a-Day Power Plus: Process evaluation of a multicomponent elementary school program to increase fruit and vegetable consumption. *Health Education & Behavior*, 27, 187-200.
- Sirother, D. B. (1989). Peer coaching for teachers: Opening classroom doors. *Phi Delta Kappa International*, 70, 824-827.
- Tanyu, M. (2007). Implementation of prevention programs: Lessons for future research and practice: A commentary on social and emotional learning: Promoting the development of all students, a chapter by Joseph E. Zins and Maurice J. Elias. *Journal of Educational & Psychological Consultation*, 17, 257-262.
- U.S. Census Bureau. (2011). *Overview of race and Hispanic origin: 2010*. Retrieved April 12, 2011, from <http://www.census.gov/prod/cen2010/briefs/c2010br02.pdf>

- U.S. Census Bureau. (n.d.). *Profile of general demographic characteristics 2000*. New York. Retrieved April 12, 2011, from <http://factfinder.census.gov/>
- Waltz, J., Addis, M. E., Koerner, K., & Jacobson, N. S. (1993). Testing the integrity of a psychotherapy protocol: Assessment of adherence and competence. *Journal of Consulting and Clinical Psychology*, 61, 620–630. doi:10.1037/0022-006x.61.4.620
- Zins, J. E., Weissberg, R. P., Wang, M. P., & Walberg, H. J. (2004). *Building academic success on social and emotional learning. What does the research say?* New York: Teachers College Press.

Date Received: December 14, 2010

Date Accepted: October 09, 2011

Action Editor: Shannon Suldo ■

Maria Regina Reyes, PhD, is a postdoctoral associate at the Child Study Center in the School of Medicine at Yale University. Her training is in applied developmental psychology, which she studied at Fordham University where she earned her doctorate. She currently is applying sophisticated analytic techniques in the evaluation of social programs in early childhood education and examining the effects of these programs on children. She is involved in numerous policy projects on early child development with an international focus.

Marc A. Brackett, PhD, is a research scientist in the Department of Psychology at Yale University; deputy director of the Health, Emotion, and Behavior Laboratory; and head of the Emotional Intelligence Unit in the Edward Zigler Center in Child Development and Social Policy. He is the lead developer of The RULER Approach to Social and Emotional Learning, and the author of more than 80 scholarly publications, including seven social and emotional learning curricula. His grant-funded research focuses on examining the effect of emotion-based skills training on child and adult outcomes related to psychological health, social competence, and both academic and work performance. He works in school systems and corporations around the world in the areas of assessment and training.

Susan E. Rivers, PhD, is an associate research scientist in the Department of Psychology at Yale University, where she earned her doctorate. She also is associate director of the Health, Emotion, and Behavior Laboratory at Yale. She is a co-developer of The RULER Approach, as well as several other curricula designed to teach emotion skills. In her grant-funded research, she investigates how emotional skills training affects positive youth development and creates supportive learning environments. She is the co-author of many scholarly articles and papers, a consultant to businesses and schools, and works as an educational advisor on children's television programs, providing expertise on both resources to teach children emotional literacy and best practices for evaluating such programs.

Nicole A. Elbertson is a research associate in the Department of Psychology at Yale University, and the Manager of the Health, Emotion, and Behavior Laboratory. Her work focuses on the development and implementation of emotional literacy programs and the dissemination of information and research related to social and emotional learning. She is the co-author of many scholarly articles, papers, and book chapters on the development, application, and evaluation of The RULER Approach.

Peter Salovey, PhD, Provost of Yale University, is the Chris Argyris Professor of Psychology. He joined the Yale faculty in 1986 after receiving an AB and AM from Stanford University and a PhD from Yale. He has authored or edited 13 books translated into 11 languages and has published more than 350 journal articles and essays, focused primarily on human emotion and health behavior. With John D. Mayer, he developed the broad framework called emotional intelligence and for decades has studied the profound effect that measurable emotional skills have on thinking and action. In his research on health behavior, he investigates the effectiveness of health promotion messages in persuading people to change risky behaviors and adapt healthy ones.