



THE GOOD SCHOOLS SEMINARS

CREATING SAFE & SUPPORTIVE SCHOOLS II: NEXT STEPS

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SESSION II: PROVIDING THE SOCIAL, EMOTIONAL, AND MEDICAL SUPPORTS THAT STUDENTS NEED: A DELIVERY CONTINUUM I

Positive Behavioral Interventions and Supports: History, Defining Features, and Misconceptions."

George Sugai & Brandi Simonsen, Center for PBIS & Center for Positive Behavioral Interventions and Supports, University of Connecticut (2012)

Describes PBIS, an implementation framework designed to enhance academic and social behavior outcomes for all students, including its history, defining practices and features, and supporting evidence-base.

Culturally Responsive Positive Behavioral Support Matters

Aydin Bal, Kathleen King Thorius & Elizabeth Kozleski (2012)

This brief describes the features of PBIS, then presents a framework for culturally responsive school wide positive behavioral interventions and supports (CRPBIS) to build supportive school climates and address enduring educational equity issues, such as the racialization of discipline and outcome disparities.

Morningside Center for Teaching Social Responsibility: What We Do

www.morningsidecenter.org/whatwedo

An overview of Morningside Center for Teaching Social Responsibility's evidence validated Programs, designed to help all members of the school community (students, school staff, and parents) develop essential life skills and create a more positive and productive learning environment.

Improving Classroom Quality: Teacher Influences and Experimental Impacts of the 4Rs Program

Joshua L. Brown, Stephanie M. Jones, Maria D. LaRusso & J. Lawrence Aber, *Journal of Educational Psychology* (2010)

Researchers saw positive outcomes from a Morningside Center program using a cluster randomized controlled trial, designed to (a) examine whether teacher social-emotional functioning forecasts differences in the quality of 3rd-grade classrooms, (b) test the experimental impact of a school-based social-emotional learning and literacy intervention on the quality of classroom processes controlling for teacher social-emotional functioning, and (c) examine whether intervention impacts on classroom quality are moderated by these teacher-related factors.

POSITIVE BEHAVIORAL INTERVENTIONS AND SUPPORTS: HISTORY, DEFINING FEATURES, AND MISCONCEPTIONS

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Purpose

Positive Behavioral Interventions and Supports (PBIS) has been defined, described, and studied ever since its introduction in the reauthorization of the Individuals with Disabilities Act (1997). The purpose of this paper is to revisit PBIS with respect to its history, defining practices and features, and supporting evidence-base.

PBIS is an implementation framework that is designed to enhance academic and social behavior outcomes for all students by (a) emphasizing the use of data for informing decisions about the selection, implementation, and progress monitoring of evidence-based behavioral practices; and (b) organizing resources and systems to improve durable implementation fidelity.

Historical Development of PBIS

1980s. During the 1980s, a need was identified for improved selection, implementation, and documentation of effective behavioral interventions for students with behavior disorders (BD) (Gresham, 1991; Sugai & Horner, 1999; Walker et al., 1996). In response, researchers at the University of Oregon began a series of applied demonstrations, research studies, and evaluation projects. These efforts indicated that greater attention should be directed toward prevention, research-based practices, data-based decision-making, school-wide systems, explicit social skills instruction, team-based implementation and professional development, and student outcomes (Biglan, 1995; Colvin, Kame'enui, & Sugai, 1993; Horner, Sugai, & Anderson, 2010; Lewis & Sugai, 1999; Mayer, 1995; Sugai & Horner 2002).

1990s. In the reauthorization of the Individuals with Disabilities Act of 1997, a grant to establish a national Center on Positive Behavioral Interventions and Supports was legislated to disseminate and provide technical assistance to schools on evidence based practices for improving supports for students with BD. Given the results of their work in the 1980s, researchers at the University of Oregon successfully competed for the opportunity to develop the PBIS Center. A defining feature of the original center was the establishment of a partnership comprising researchers and implementers from the Universities of Oregon, Kansas, Kentucky, Missouri, and South Florida, and from prominent providers of specialized supports (i.e., Illinois Wraparound Network, May Institute, Sheppard Pratt Health Systems) (www.pbis.org, Sugai et al., 2000).

2000s. The National Technical Assistance (TA) Center on PBIS is currently in Year 14 (third 5-year grant cycle), and has assisted in shaping the PBIS framework (also referenced as “school-wide positive behavior supports”), and providing direct

professional development and technical assistance to more than 16,000 schools. Other Center activities include (a) web-based collection and dissemination of evidence-based behavior practices and systems (www.pbis.org), (b) two national leadership and dissemination conferences (October Leadership Forum, and March partnership with the Association for Positive Behavior Supports), (c) three best-practices and systems “blueprints” (Implementation, Evaluation, and Professional Development), (d) numerous publications and professional presentations, and (e) school, district, and state implementation demonstrations.

What is PBIS?

Although initially established to disseminate evidence-based behavioral interventions for students with BD, the National TA Center on PBIS shifted focus to the school-wide behavior support of all students, and an emphasis on implementation practices and systems. As a result, *PBIS is defined as a framework for enhancing the adoption and implementation of a continuum of evidence-based interventions to achieve academically and behaviorally important outcomes for all students* (Sugai et al., 2000). As a “framework,” the emphasis is on a process or approach, rather than a curriculum, intervention, or practice. The “continuum” notion emphasizes how evidence- or research-based behavioral practices are organized within a multi-tiered system of support, also called “response-to-intervention” (Sugai & Horner, 2009). Within this definition, the mutually beneficial relationship between academic and social behavior student success is highlighted (Chard, Harn, Sugai, & Horner, 2008; Sugai, Horner, & Gresham, 2002). Finally, the important supportive relationship between positive school- and classroom-wide culture and individual student success is emphasized.

Characteristics of PBIS

The PBIS framework has a number of defining characteristics. First and foremost, student outcomes serve as the basis for practice selection, data collection, and intervention evaluations. These outcomes are (a) academic and social, (b) individual and small group, and (c) judged on their educational and social value and importance (McIntosh, Filter, Bennett, Ryan, & Sugai, 2010; McIntosh, Flannery, Sugai, Braun, & Cochrane, 2008).

Second, rather than focusing on specific packaged or manualized interventions, the PBIS framework highlights specification and adoption of evidence- and research-based practices that characterize packaged programs. These practices are organized to support students across (a) school-wide (e.g., teaching and acknowledging a small number of positively stated behavioral expectations, clear and distinctive definitions for rule violations, and data-decision rules), (b) nonclassroom (e.g., active supervision, reminders, teaching setting-specific routines), (c) classroom (e.g., effective academic instruction, active supervision, high praise rates), and (d) individual student (e.g., function-based behavior intervention supports, explicit social skills instruction, wraparound processes) routines (Eber, Sugai, Smith, & Scott, 2002; Lewis & Sugai, 1999).

Third, consistent with the response-to-intervention approach, PBIS is characterized by the establishment of a continuum of behavior support practices and systems (Sugai & Horner, 2009). These practices are unified with procedures for universal screening, continuous progress monitoring, team-based decision making rules and procedures, explicit monitoring of implementation fidelity, and local content expertise and fluency. In addition, the PBIS framework stresses the importance of embedded and continuous professional development, monitoring based on phase of implementation, and systems-based competence and supports (e.g., policy, leadership, funding) (Sugai, Horner, Fixsen, & Blase, 2010).

Finally, the effective, efficient, and relevant use of data or information to guide decision-making links the above characteristics. The collection, analysis, and use of data are considered essential for a number of PBIS purposes: (a) need clarification and priority, (b) matching of need and intervention or practice, (c) evaluation of research-base for practice selection, (d) student responsiveness and outcome impact, (e) intervention or practice fidelity, (f) social and ecological validity, and (g) implementation adjust for efficiency, effectiveness, and relevance (Lewis-Palmer, Sugai, & Larson, 1999).

Impact and Evidence Base for PBIS

Included in the 16,000 school teams that have been trained on the PBIS implementation framework (especially, tier 1 or primary prevention), are 3 states with more than 60% of schools involved in PBIS implementation, 9 states with more than 40%, and 16 states with more than 30%. This impact reflects efforts by state and district leadership teams to build capacity for sustaining and scaling up their implementation of PBIS. Schools that are effective in their implementation have (a) more than 80% of their students and staff who can indicate the desired positive behavioral expectations for a given school setting, (b) high rates of positive acknowledgements for contributing to a positive and safe school climate, (c) have more than 70-80% of their students who have not experienced an office discipline referral for a disciplinary rule infraction, (d) a good idea about which students require more intensive behavior supports, and (e) systems for regular review of their school-wide behavior data to guide their PBIS action planning and implementation decision making (Lewis & Sugai, 1999; Sugai et al., 2000; Taylor-Greene et al., 1997).

In addition, since the 1980s, a number of experimental studies have documented the effectiveness of the PBIS framework at the school-wide level. This body of research supports improvements in problem disciplinary behavior, school climate, organizational health, student bullying behavior and peer victimization, and academic achievement (Bradshaw, Koth, Bevens, Ialongo, & Leaf, 2008; Bradshaw, Koth, Thornton, & Leaf, 2009; Bradshaw, Mitchell, & Leaf, 2010; Bradshaw, Reinke, Brown, Bevens, & Leaf, 2008; Horner et al., 2009; Horner, Sugai, & Anderson, 2010; Luiselli, Putnam, & Sunderland, 2002; Muscott, Mann, & LeBrun, 2008; Nelson et al., 2009; Pas, Bradshaw, & Mitchell, 2011; Sadler & Sugai, 2009; Simonsen et al., 2011; Simonsen, Fairbanks, Briesch, Myers, & Sugai, 2008; Waasdorp, Bradshaw, & Leaf, in press).

Common Misconceptions About PBIS

Misconception #1: “PBIS is an intervention or practice.” Although PBIS is comprised of research-based behavioral practices and interventions that have been shown to improve social behavior and academic achievement, PBIS is more accurately described as a “framework” or “approach” that provides the means of selecting, organizing and implementing these evidence-practices by giving equal attention to (a) clearly defined and meaningful student outcomes, (b) data-driven decision making and problem solving processes, and (c) systems that prepare and support implementers to use these practices with high fidelity and durability.

Misconception #2: “PBIS emphasizes the use of tangible rewards which can negatively affect the development of intrinsic motivation.” The PBIS framework includes practices that provide students with feedback on the accuracy and use of their social skills and behaviors, in the same manner that feedback is provided for successful and accurate academic performance. When new and/or difficult social skills are being acquired, more teacher and external feedback systems might be used to give students information about their social behavior. However, as students become more fluent in their use of social skills, external feedback systems are reduced and replaced by more natural environmental and/or self-managed feedback (Akin-Little & Little, 2009; Akin-Little, Eckert, Lovett, & Little, 2004). Although intrinsic motivation is difficult to conceptualize and measure from a behavior analytic perspective, little evidence exists to suggest that the use of positive reinforcement, rewards, acknowledgements, and recognition has negative effects on academic and social behavior achievement (Cameron, Bank, & Pierce, 2001; Cameron & Pierce, 2002; Cameron, 2005).

Misconception #3: “PBIS is something new that was designed for students with disabilities.” The phrase “Positive Behavioral Interventions and Supports” was first coined in the reauthorization of the IDEA; however, the practices, principles, and systems that characterize PBIS have been described, studied and implemented since the early 1960s and 1970s (Carr, 2007; Carr et al., 2002; Sugai & Horner, 2002). PBIS is a marriage of behavioral theory, behavior analysis, positive behavior supports, and prevention and implementation science that has been developed to improve how schools select, organize, implement, and evaluate behavioral practices in meeting the needs of all students (Sugai et al., 2000).

Misconception #4: “PBIS is for behavior, and RtI is for academics.” RtI is best conceptualized as a framework for developing and implementing multi-tiered systems of academic and behavior support, and is comprised of (a) universal screening, (b) continuous progress monitoring, (c) continuum of evidence-based practices, (d) team-driven data-based decision making, and (e) implementation fidelity evaluation (Sugai & Horner, 2009). The PBIS framework is the application of RtI principles to the improvement of social behavior outcomes for all students. PBIS is often described as the “behavior side” of the RtI multi-tiered continuum; however, this description misrepresents the actual integrated implementation of behavior and academic supports (Sugai, Horner, Fixsen, & Blase, 2010).

References

- Akin-Little, A., & Little, S. G. (2009). The true effects of extrinsic reinforcement on “intrinsic” motivation. In A. Akin-Little, S. G. Little, M. A. Bray, & T. J. Kehle (Eds). *Behavioral interventions in schools: Evidence-based positive strategies* (pp. 73-92). Washington DC: American Psychological Association.
- Akin-Little, K. A., Eckert, T. L., Lovett, B. J., & Little, S. G. (2004). Extrinsic reinforcement in the classroom: Bribery or best practices. *School Psychology Review, 33*, 344-362.
- Biglan, A. (1995). Translating what we know about the context of antisocial behavior in to a lower prevalence of such behavior. *Journal of Applied Behavior Analysis, 28*, 479-492.
- Bradshaw, C. P., Koth, C. W., Bevans, K. B., Ialongo, N., & Leaf, P. J. (2008). The impact of school-wide positive behavioral interventions and supports (PBIS) on the organizational health of elementary schools. *School Psychology Quarterly, 23*, 462-473.
- Bradshaw, C. P., Koth, C. W., Thornton, L. A., & Leaf, P. J. (2009). Altering school climate through school-wide Positive Behavioral Interventions and Supports: Findings from a group-randomized effectiveness trial. *Prevention Science, 10*(2), 100-115.
- Bradshaw, C. P., Mitchell, M. M., & Leaf, P. J. (2010). Examining the effects of schoolwide positive behavioral interventions and supports on student outcomes: Results from a randomized controlled effectiveness trial in elementary schools. *Journal of Positive Behavioral Interventions, 161-179*.
- Bradshaw, C. P., Reinke, W. M., Brown, L. D., Bevans, K. B., & Leaf, P. J. (2008). Implementation of school-wide Positive Behavioral Interventions and Supports (PBIS) in elementary schools: Observations from a randomized trial. *Education & Treatment of Children, 31*, 1-26.
- Cameron, J., Banko, K. M., & Pierce, W. E. (2001). Pervasive negative effects of rewards on intrinsic motivation: The myth continues. *The Behavior Analyst, 24*(1), 1-44.
- Cameron, J. & Pierce, W. D. (2002). *Rewards and intrinsic motivation: Resolving the controversy*. Westport, CT: Bergin and Garvey.
- Cameron, J. (2005). The detrimental effect of reward hypothesis: Persistence of a view in the face of disconfirming evidence. In Heward, W.L., Heron, T.E., Neef, N.A., Peterson, S.M., Sainato, D.M., Cartledge, G., Gardner, R., Peterson, L.D., Hersh, S.B., & Dardig, J.C. (Eds). *Focus on behavior analysis in education: Achievements, challenges, and opportunities* (pp. 304-315). Upper Saddle River, New Jersey: Pearson Merrill Prentice Hall.
- Caplan, G. (1964). *Principles of prevention in psychiatry*. New York: Basic Books.
- Carr, E. G. (2007). The expanding vision of positive behavior support: Research perspectives on happiness, helpfulness, and hopefulness. *Journal of Positive Behavior Interventions, 9*, 3-14.
- Carr, E. G., Dunlap, G., Horner, R. H., Koegel, R. L., Turnbull, A. P., & Sailor, W. (2002). Positive behavior support: Evolution of an applied science. *Journal of Positive Behavior Interventions, 4*, 4-16.

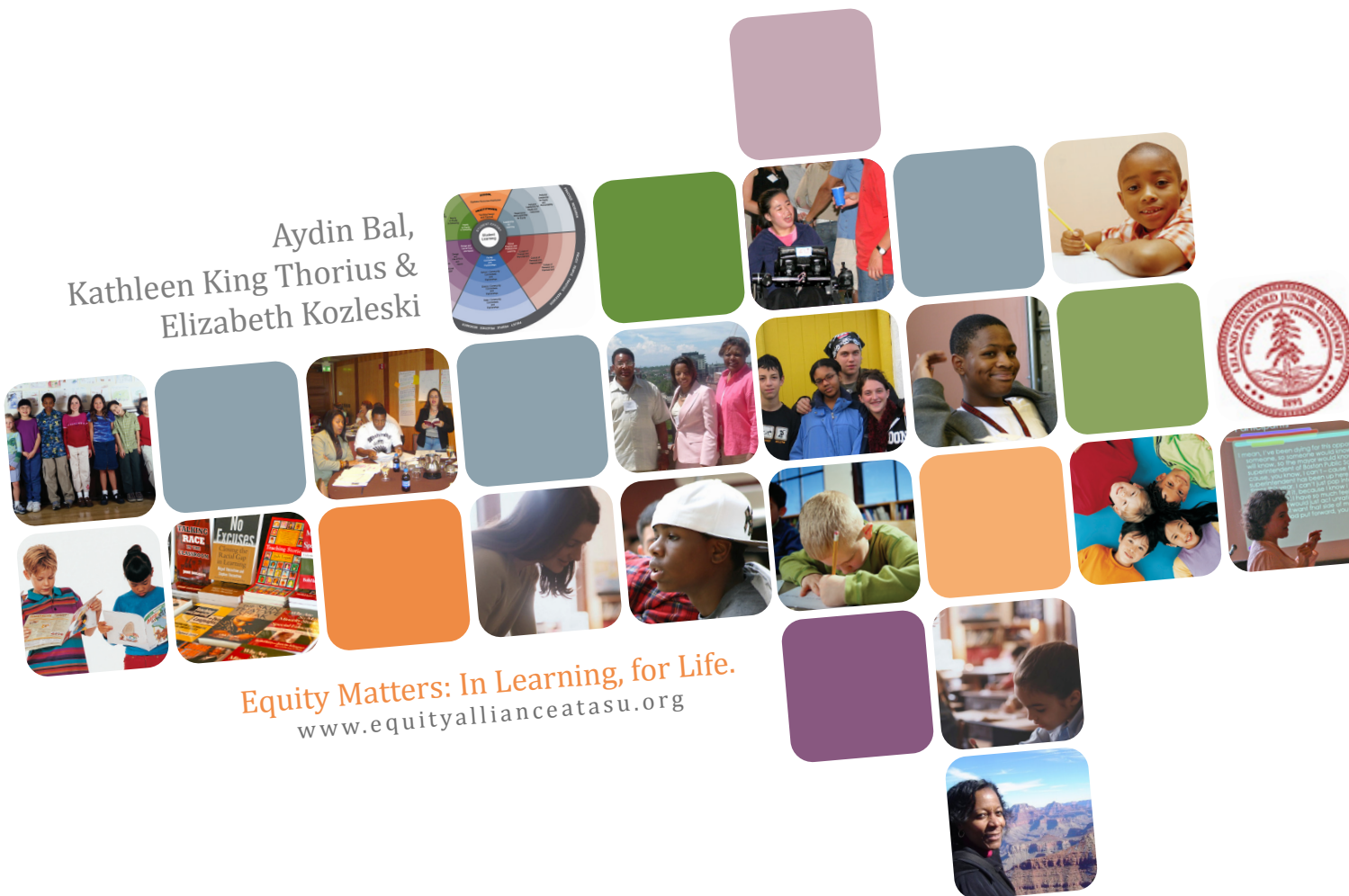
- Chard, D., Harn, B., Sugai, G., & Horner, R. (2008). Core Features of Multi-Tier Systems of Academic and Behavioral Support. In Greenwood, C. G. (Ed.), *Elementary School-Wide Prevention Models: Real Models and Real Lessons Learned*. New York: Guilford.
- Colvin, G., Kame'enui, E. J., & Sugai, G. (1993). School-wide and classroom management: Reconceptualizing the integration and management of students with behavior problems in general education. *Education and Treatment of Children, 16*, 361-381.
- Eber, L., Sugai, G., Smith, C., & Scott, T. (2002). Blending process and practice to maximize outcomes: Wraparound and positive behavioral interventions and supports in the schools. *Journal of Emotional and Behavioral Disorders, 10*, 171-181.
- Gordon, R. S. (1983). An operational classification of disease prevention. *Public Health Reports, 48*, 107-109.
- Gresham, F. S. (1991). Conceptualizing behavior disorders in terms of resistance to intervention. *School Psychology Review, 18*, 37-50.
- Gresham, F. S. (2002). Responsiveness to intervention: an alternative approach to the identification of learning disabilities. In R. Bradley, L. Danielson, & D. Hallahan (Eds.). *Learning Disabilities: Research to Practice* (pp. 467-519). Mahwah, NJ: Lawrence Erlbaum.
- Horner, R., Sugai, G., Smolkowski, K., Eber, L., Nakasato, J., Todd, A., & Esperanza, J., (2009). A randomized, wait-list controlled effectiveness trial assessing school-wide positive behavior support in elementary schools. *Journal of Positive Behavior Interventions, 11*, 133-145.
- Horner, R. H., Sugai, G., & Anderson, C. M. (2010). Examining the evidence base for school-wide positive behavior support. *Focus on Exceptionality, 42*(8), 1-14.
- Individuals with Disabilities Education Improvement Act (2004). Public Law 108-446 (20 U.S.C. 1400 *et seq.*).
- Lewis, T. J., & Sugai, G. (1999). Effective behavior support: A systems approach to proactive school-wide management. *Focus on Exceptional Children, 31*(6), 1-24.
- Lewis-Palmer, T., Sugai, G., & Larson, S. (1999). Using data to guide decisions about program implementation and effectiveness. *Effective School Practices, 17*(4), 47-53.
- Luiselli, J. K., Putnam, R. F., & Sunderland, M. (2002). Longitudinal evaluation of behavior support intervention in a public middle school. *Journal of Positive Behavior Interventions, 4*, 182-188.
- Mayer, G. (1995). Preventing antisocial behavior in the schools. *Journal of Applied Behavior Analysis, 28*(7), 467-478.
- McIntosh, K., Filter, K. J., Bennett, J., Ryan, C., & Sugai, G. (2010). Principles of sustainable prevention: Designing scale-up of school-wide positive behavior support to promote durable systems. *Psychology in the Schools, 47*, 5-21.
- McIntosh, K., Flannery, K. B., Sugai, G., Braun, D., & Cochrane, K. L. (2008). Relationships between academics and problem behavior in the transition from middle school to high school. *Journal of Positive Behavior Interventions, 10*, 243-255.

- Muscott, H. S., Mann, E. L., & LeBrun, M. R. (2008). Positive behavioral interventions and supports in New Hampshire: Effects of Large-Scale Implementation of Schoolwide positive behavior support on student discipline and academic achievement. *Journal of Positive Behavior Interventions*, 10, 190-205.
- Nelson, J. R., Hurley, K. D., Synhorst, L., Epstein, M. H., Stage, S., & Buckley, J. (2009). The child outcomes of a behavior model. *Exceptional Children*, 76, 7-30.
- Pas, E., Bradshaw, C. P., & Mitchell, M. M. (2011). Examining the validity of office discipline referrals as an indicator of student behavior problems. *Psychology in the Schools*, 48(6), 541-555.
- Pierce, W.D., Cameron, J., Banko, K.M., & So, S. (2003). Positive effects of rewards and performance standards on intrinsic motivation. *Psychological Record*, 53, 561-579.
- Sadler, C., & Sugai, G. (2009). Effective behavior and instructional support: A district model for early identification and prevention of reading and behavior problems. *Journal of Positive Behavior Interventions*, 11, 35-46.
- Simonsen, B., Eber, L., Black, A., Sugai, G., Lewandowski, H., Myers, D., & Sims, B. (2011). Positive behavioral interventions and supports in Illinois: Lessons learned for large-scale implementation. *Journal of Positive Behavior Interventions*, 14, 5-16.
- Simonsen, B., Fairbanks, S., Briesch, A., Myers, D., & Sugai, G. (2008). Evidence-based practices in classroom management: Considerations for research to practice. *Education and Treatment of Children*, 31, 351-380.
- Sugai, G., & Horner, R. H. (2010). School-wide positive behavior support: Establishing a continuum of evidence based practices. *Journal of Evidence-based Practices for Schools*, 11(1), 62-83.
- Sugai, G., & Horner, R. H. (2009). Responsiveness-to-intervention and school-wide positive behavior supports: Integration of multi-tiered approaches. *Exceptionality*, 17, 223-237.
- Sugai, G., & Horner, R. H. (2008). What we know and need to know about preventing problem behavior in schools. *Exceptionality*, 16, 67-77.
- Sugai, G., & Horner, R. H. (2002). The evolution of discipline practices: School-wide positive behavior supports. *Child and Family Behavior Therapy*, 24, 23-50.
- Sugai, G., & Horner, R. H. (1999). Discipline and behavioral support: Preferred processes and practices. *Effective School Practices*, 17(4), 10-22.
- Sugai, G., Horner, R. H., & Gresham, F. (2002). Behaviorally effective school environments. In M. R. Shinn, G. Stoner, & H. M. Walker (Eds), *Interventions for academic and behavior problems: Preventive and remedial approaches* (pp. 315-350). National Association of School Psychologists. Silver Spring, MD.
- Sugai, G., Horner, R. H., Dunlap, G., Hieneman, M., Lewis, T. J., Nelson, C. M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A. P., Turnbull, H. R., III, Wickham, D. Reuf, M., & Wilcox, B. (2000). Applying positive behavioral support and functional behavioral assessment in schools. *Journal of Positive Behavioral Interventions*, 2, 131-143.
- Sugai, G., & Horner, R. H., Fixsen, D., & Blase, K. (2010). Developing systems-level capacity for RtI implementation: Current efforts and future directions. In T. A. Glover & S. Vaughn (Eds.). *Response to intervention: Empowering all students to*

- learn – A critical account of the science and practice* (pp. 286-309). New York: Guilford.
- Taylor-Greene, S., Brown, D., Nelson, L., Longton, J., Gassman, T., Cohen, J., Swartz, J., Horner, R. H., Sugai, G., & Hall, S. (1997). School-wide behavioral support: Starting the year off right. *Journal of Behavioral Education, 7*, 99-112.
- Waasdorp, T. E., Bradshaw, C. P., & Leaf, P. J. (in press). The impact of school-wide positive behavioral interventions and supports on bullying and peer rejection: A randomized control effectiveness trial. *Archives of Pediatrics and Adolescent Medicine*.
- Walker, H. M., Horner, R. H., Sugai, G., Bullis, M., Sprague, J. R., Bricker, D., & Kaufman, M. J. (1996). Integrated approaches to preventing antisocial behavior patterns among school-age children and youth. *Journal of Emotional and Behavioral Disorders, 4*, 193-256.

Culturally Responsive Positive Behavioral Support Matters

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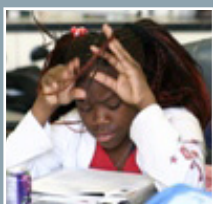
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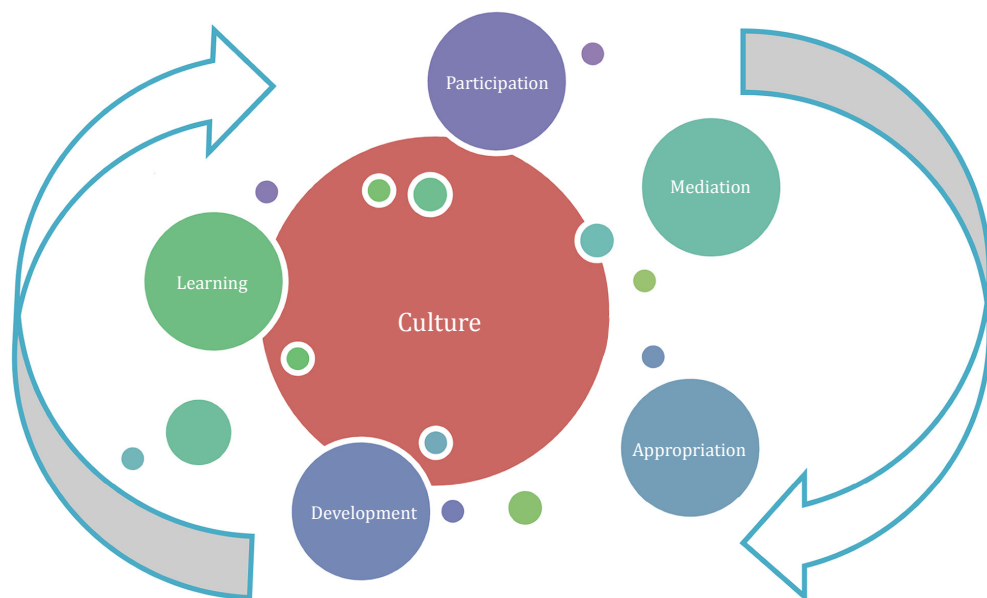
In this *What Matters* brief, we explore the critical role of addressing and supporting behavior and socialization in schools as educators, students, families, schools, and communities embrace the waves of diversity that surge through our schools and institutional systems. That diversity is a vital resource for systemic transformation. In this brief, we first describe the features of PBIS and then present a framework for culturally responsive school wide positive behavioral interventions and supports (CRPBIS) to address enduring educational equity issues, such as the racialization of discipline and outcome disparities, and to build safe, inclusive, and supportive school climates. The CRPBIS framework offers a multifaceted approach that intentionally intervenes in the linkages between individuals and social structures to prepare students for the complex roles of adulthood. The CRPBIS framework supports the development of socially just, academically rich, and behaviorally positive local school contexts. Using Cultural-Historical Activity Theory (CHAT), a sociocultural theory of systemic change and the literature from the fields of cultural and organizational psychology, multicultural education, social neuroscience, urban sociology, and the new learning sciences, CRPBIS re-mediates school cultures to improve the quality of social and academic opportunities. Grounded in a *Global Social Justice* perspective (Soja, 2010), the CRPBIS framework permeates early intervening, culturally responsive intensive instruction, specialized student and teacher supports, and coalition building, with the desired outcomes of socially just systemic transformation.



Culturally Responsive Positive Behavioral Support Matters

The importance of understanding the cultural nature of education has gained greater attention, especially after immense demographic changes in US schools, where cultural, linguistic, and ability differences create barriers as grounds for different rights, privileges, and outcomes. Children and youth bring complex sets of abilities and experiences that may or may not fit the expectations and dispositions they encounter in school. Consider the ways in which some racial minority students, specifically African American students, are punished more severely for less serious, more subjective reasons such as disrespect (Skiba, Michael, Nardo, & Peterson, 2002). Explanations for racialized school discipline practices involve issues related to the socio-historical cultural practices designed to control and punish (e.g., the use of exclusionary discipline) and

lack of available professional development opportunities for developing culturally responsive teaching and classroom management practices. Racial minority students' experiences and cultural and linguistic practices (i.e., ways of knowing, behaving, and being) are often devalued and/or pathologized, so that for example, academic identities of racial minority students may be constructed as disruptive, resistant, outcast, and unlikely to succeed (Wortham, 2006). Yet, individual cultural identities are only a part of the cultural construction of learning and development. It is in the interaction itself that culture emerges, hybridizes, and evolves. Learning and development are cultural processes that are socially, historically, and geographically situated.



Children's behaviors and learning, whether in or out of school, are mediated by cultural contexts and predicated in part on the opportunities for children to engage, understand, and construct methods and processes for communicating, challenging, and making meaning of the world around them. This is a work in progress, created through participation in community with others. Part of the process of becoming educated is becoming socialized to the cultural ways in which knowledge and skills are pursued, understood, and performed in and outside of schools.





Positive Behavioral Interventions and Supports

Over the last two decades, Positive Behavioral Interventions and Supports (PBIS) has emerged as a tiered model of behavioral support and early intervening framework to facilitate a positive, predictable, and supportive school-wide social and academic environment. PBIS emphasizes prevention, continuous progress monitoring, data-based decision making, evidence-based practices, and the coordination of school activities in order to sustain positive student and adult behaviors (Sugai & Horner, 2002; 2006). The first tier of PBIS refers to the reliance on proactive rather than reactive, exclusionary discipline practices. In PBIS, students are directly taught and systematically reminded of behavioral expectations. Certain individual and social behaviors are reinforced while other behaviors are systematically decreased. Ideally, desired outcomes and corresponding incentives and reinforcements for demonstrating these outcomes are co-generated and thus valued by students, families, educators, and other stakeholders who comprise school and/or district leadership teams that develop action plans for system-wide PBIS implementations. PBIS is designed to be practiced as a school-wide endeavor so that the social benefits of creating common, shared understanding of desirable behaviors among members of school communities are tapped. PBIS has great potential as one of the most important innovations in the field of special education in addressing discipline issues and the enduring outcome disparities. However, while PBIS implementations decreased overall exclusionary discipline practices, the decreases appeared to pertain to the European American student population, while African American students remained overrepresented (Vincent & Tobin, 2010). Moreover, as Utley, Kozleski, Smith, & Draper (2002) noted, much of the original research and development of PBIS was done in suburban, dominant culture schools where assumptions about how and who should be involved in the development of school-wide discipline systems were closely tied to specific cultural views of behavior and development that most often coincided with the dominant cultural norms.

Multi-tiered System of Supports

Grounded in a multi-tiered framework of prevention science for the delivery of services and supports, the first tier of PBIS supports is designed to address the needs of all students and within which educators (1) directly teach social skills and expected school behaviors, (2) create opportunities for students to practice those behaviors, and (3) reinforce compliance (Sugai & Horner, 2002). Additionally, the universal tier emphasizes attention to addressing the so-called “risk factors” such as low achievement, truancy, high-student mobility, and histories of suspensions or expulsions. Educators are also encouraged to capitalize on students’ protective factors, such as high degrees of collaboration between educators and families, as well as opportunities for extracurricular activities (George, Kincaid, & Pollard-Sage, 2009). In the “secondary tier” Behavioral Analysis (FBA) and empirically supported behavioral interventions in smaller groups are applied for the students who are not responsive to the universal supports provided to all students. In the intensive tier students who are unresponsive to universal and secondary tiers are exposed to highly specialized, FBA-informed interventions by specialized teams of special educators, behavioral interventionists, school psychologists, and counselors. Determinations about which students require more intensive behavior interventions and supports are made by PBIS teams consisting of members who represent multiple grade levels in the school and are based on the monitoring of a number of data sources and outcomes, such as office discipline referrals (ODRs, in a given time period and

location by student and staff member, attendance, tardiness, suspension, and academic outcomes (e.g., standardized test scores and patterns of course failure rates). Through these means, PBIS focuses on the social organization of the entire school (e.g., collective behaviors, working structures, and routines of educators) as well as individual student behaviors.

Intensive

Secondary

Universal

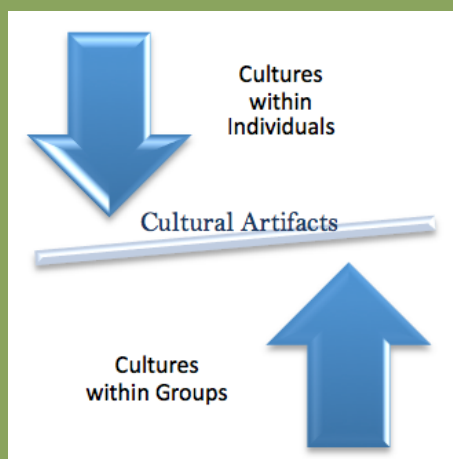
Cultural Context in PBIS

PBIS is a set of principles and implementation strategies assumed culturally neutral that is intended to achieve a *contextual fit* in any given school depending on the situations in which teaching/learning and student behaviors take place. PBIS accentuates “the importance of procedures that are socially and culturally appropriate. The contextual fit between intervention strategies and the values of families, teachers, schools, support personnel, and community agency personnel may affect the

quality and durability of support efforts” (Sugai et al., 2000, p. 136). As percentages of students from non-dominant cultures increase, researchers and practitioners concerned with behavioral outcome disparities have called for a culture-based approach to design “culturally appropriate” PBIS models (King et al., 2006; Utley et al., 2002). To date, there is only a small number of systemic PBIS implementation studies and theoretical discussions that incorporate cultural considerations in PBIS models (e.g., Eber, Upreti, & Rose, 2010; Jones, Caravaca, Cizek, Horner, Vincent, 2006; Vincent, Randall, Cartledge,

Tobin, & Swain-Bradway, 2011; Wang, McCart, & Turnbull, 2007). In this literature, operational definitions of culture and how it is considered within local PBIS implementation and outcomes efforts lack detail, at best. Culture is often conceptualized from a narrow and largely static perspective and is seen as differences between students’ and teachers’ verbal and nonverbal behaviors (e.g., greetings), values (e.g., collectivist or individualistic cultures), or thoughts (e.g., learning styles).

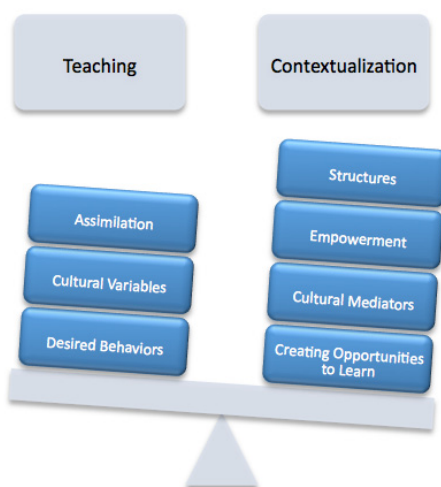
Current recommendations in the PBIS literature for considering cultural and contextual factors in culturally responsive PBIS implementation focus on three areas of practice: a) Collaborating with families and community members in teaching and reinforcing school-wide behavioral expectations; b) Monitoring disproportionality in ODRs between dominant and non-dominant groups through analysis of trends in data disaggregated across student demographic characteristics (i.e., race/ethnicity); and c) Providing professional development aimed at increasing practitioners' awareness of differences between their own and non-dominant students' cultural patterns of communication styles, roles of authority, etc. that will allow them to interpret individual students' problem behaviors correctly.



While these recommendations are important and our framework incorporates them, this set of recommendations does not convey the need to assess and develop responses to local socially, historically, and geographically situated contexts that acknowledge the cultural differences among people, histories, groups, and their goals and approaches to facilitate learning and development of infants, children, and youth. In this brief, we offer a comprehensive cultural theory as well as a methodology to guide practitioners and researchers in understanding and remediating school climates and academic learning opportunities to implement culturally responsive PBIS (CRPBIS).

Shifts in Conceptualizations of School Cultures in CRPBIS

Everything in education relates to culture—to its acquisition, its transmission, and its inventions (Erickson, 2009). As such, culture plays a central role in the ways in which local CRPBIS frameworks are designed and implemented in terms of the four tenets of PBIS: a) outcomes, b) empirically validated practices, c) data-based decision making, and d) systems change (Sugai & Horner, 2002). In this section, we describe four shifts in cultural practices that account for CRPBIS.



Culture is a complex concept and must be addressed comprehensively as a feature of all human social activities and interaction. Cultural histories, institutional traditions, and their re-formation in action are critical factors in shaping, naming, and marginalizing some types of behavior while reifying others (Kozleski & Huber, 2010). Accordingly, rather than mainstream approaches that seek to understand student culture as a variable (i.e., as a proxy indicator for race, nationality, language, etc.) that in turn, inform how educators might teach minority students and their families the desired school behaviors, CRPBIS starts with examination of the cultural practices of schools. The cultural practices are entrenched institutional processes that generate long-lasting learning and social opportunity gaps, and may be connected to structural systems of oppression in local neighborhood communities and larger society (Artiles, Bal, & Thorius, 2011; Ladson-Billings, 2006). An example of this type of cultural practice is a school's use of retention as an intervention for struggling students, despite overwhelming evidence that such practice is disproportionately utilized with racial minority students, and produces damaging outcomes (Jimerson,

2001; Perez, 2010). While the commonsense logic supporting retention is that students will have more time to learn academic content, it is also associated with dominant cultural norms of merit; only deserving people should pass to the next level (Yeskel, 2008). Similarly, a local school's practice of exclusionary discipline cannot be solely understood and transformed by using disaggregated data and changing the perceptions of local practitioners. It requires a socially, historically, and geographically situated systemic transformation model led by local stakeholders.

CRPBIS begins with uncovering and examining the long-lasting cultural assumptions in the US education system that are reproduced, shaping school climate, rituals, and routines. Therefore, it facilitates practitioners' and other stakeholders' collective development of a critical awareness of cognitive and social innovations that shift how outcomes for behavior and interaction are thought about and assessed within a school. Additionally, the CRPBIS framework helps educators and other stakeholders consider what types of data drives problem solving and decision-making, as well as how data informs the process. The shifts move practice from potentially problematic, punitive approaches toward careful attention to diverse designs for learning, student empowerment, and social opportunities. Drawing on evidence from twenty-three years of facilitating transformative systemic change in schools in national technical assistance projects, the following shifts in cultural practice are vital components of CRPBIS.

From Teaching Desired Behaviors to Creating Opportunities to Learn. Educators who are working to shift their emphasis from their own teaching to creating opportunities for their own and students' learning care about and regularly survey students' strengths, interests, and preferences. This applies not only to what students are interested in learning about, but how they prefer to participate in terms of types of activities, acceptable ways of sharing information about themselves and others, and how physically active they like to be while learning. Movement toward student-centered learning environments is essential in CRPBIS because, within them, educators set up contingencies for students to assess interactions with each other and with educators, determine areas of strength and need, and create solutions that make sense in the context of that particular setting (e.g., classroom, class, school), all without a need for being corrected or rewarded by educators.



From Understanding Culture as a Variable to Exploring the Cultures in Schools as Contextual Mediators. Educators engaged in this shift come to view culture, and the need for cultural responsiveness, as integral to all PBIS efforts, rather than a student variable that considers issues of race, ethnicity, and other identity markers as strategic points of PBIS implementation. As part of this shift, educational stakeholders, including students and families, come together to examine data that allow for critical discovery and discussion about cultural patterns in schools, and their school, that are related to student discipline and behavior, and concerns about both. Further, these stakeholders examine authentic student-student and educator-student interactions that are deemed desirable or undesirable from a variety of perspectives and explore the ways in which individuals' and groups' cultural experiences shape these perspectives. These activities are crucial elements of the learning experiences in schools engaged in CRPBIS.

From Local (Borders Around) Fairness to Local to Global Justice. CRPBIS is grounded in a critical social-spatial justice perspective, *Local to Global Justice*, that endorses "more progressive and participatory forms of democratic politics and social activism, and provides new ideas about how to mobilize and maintain cohesive coalitions and regional confederations of grassroots and justice-oriented social movements" (Soja, 2010, p. 6). Desired outcomes of PBIS models, even some that are considered culturally responsive, are often measured as reduction in ODRs and reactive, exclusionary discipline (e.g., suspension and expulsion), and elimination of disparities in referrals and exclusionary practices between racial, ethnic, and ability groups, and more generally, improvements in school climate (Skiba, Ritter, & Middelberg, 2010). While these are critical concerns, CRPBIS emphasizes a shift that expands locally bounded concerns about fairness defined as equal outcomes for equal groups, toward the mobilization and maintenance of grassroots and justice-oriented social movements to support systemic transformation efforts in schools. In doing so, a Local to Global Justice critical social-spatial perspective blurs the boundaries of schools and the communities within which they are located and serve. This involves stakeholder inquiry about equitable social interactions and outcomes across multiple planes of analysis (i.e., across classroom, school, community, and larger geographies), with concerns for improving such relations and their consequences both within and outside school walls.

From Cultural Assimilation to Student, Family, and Community Empowerment. CRPBIS emphasizes desired outcomes of student, family, and community agency; that is, the power to act in one's best interest and on one's own behalf, in determining what types of social interaction are desired in education settings. This represents a shift away from the assumption that the behaviors educators desire students to demonstrate are relevant, or even in the best interest of student learning and interaction. This shift also acknowledges that emphasis on how educators desire students to interact is heavily shaped by educators' cultural beliefs, values, and practices as well as the status quo for what is expected in schools, and does not account for students' and practitioners' agency in determining what they believe is important in their interactions with others. For this reason, schools engaged in CRPBIS actively involve students, families, and community members in identifying interaction patterns that are necessary for student engagement and learning, which patterns are problematic, and ways that not only educators, but students and families can participate in teaching and modeling desired behaviors through a variety of indirect and direct instructional methodologies.

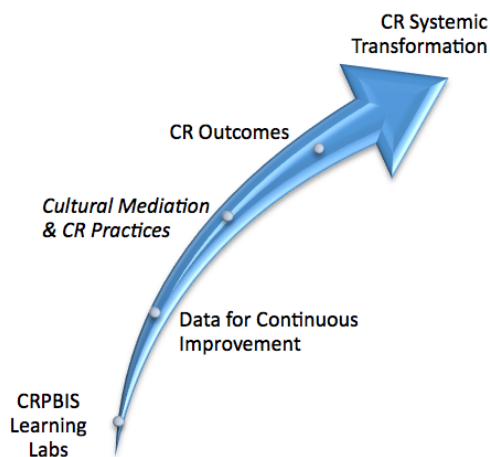
Implementing CRPBIS: Five Processes of CRPBIS Practice

CRPBIS is grounded in the basic tenets and promises of PBIS for assisting local schools that are in the early stages of PBIS implementation. It is designed to remediate social and academic activities within schools that place specific groups of students at the margins (Artiles & Kozleski, 2007) and to revitalize the activity arenas within schools to involve, give voice to, and reconstitute the practices, norms, rituals, rules, and division of labor within the school culture. A set of specific processes is employed for remediating culture of a school inside out. Reculturation of the schools requires committed involvement of teachers, families, and students to have a continuous cycle of reflection and action in an open dialogue (not top-down prescriptions of linear interventions) to create a consciousness of the oppressive and marginalizing institutional practices and jointly develop and implement contextually valid solutions from the ground-up (Freire, 2000; Gutiérrez, 2008).

In the following section, we explore how CRPBIS helps to set a shared agenda, design curricula, identify what will be measured, and inform what teachers and students learn to do. The CRPBIS framework follows five inter-ceptive processes of practice that anchor the work of CRPBIS implementation in schools as a systemic transformation methodology: (a) Forming CRPBIS Learning Labs; (b) Determining Desired Outcomes of CRPBIS; (c) Understanding Cultural Mediation and Implementing Culturally Responsive Practices; (d) Using Data for Continuous Improvement and Innovation; (e) Ongoing Systemic transformation.

Forming CRPBIS Learning Labs

Overall, the role of CRPBIS implementers is to facilitate and sustain an ecologically fit systemic change process led by local teams. Implementation of CRPBIS starts with the for-



mation of a structured learning activity called Learning Lab (Engeström & Sannino, 2010). In the CRPBIS Learning Lab, establishing a dialogue among all stakeholders including practitioners, families, community members, and students is essential for forming praxis. This is defined as a collective critical reflection and action process that draws from daily tensions (e.g., increasing instances of bullying, demographic changes, disproportionality in ODRs, or lack of family-school collaboration) and systemic disruptions (e.g., unequal learning opportunities, lack of school funding, and residential segregation) to develop local solutions and lead a systemic transformation. The Learning Labs are comprised of students, families, and skilled behavior interventionists, teachers, and school leaders. Learning Labs may also include district or state

representatives, local community members from business, non-government organizations (e.g., the Urban League and the Boys and Girls Club), and community activists to the extent possible. Rather than conceptualize learning labs as yet another school-wide team, the Labs may have membership from or replace existing school-based implementation structures such as school-wide improvement teams, PBIS teams, or other, school-wide organizational teams designed to provide leadership for school change.

The Learning Labs are conceptualized as research and innovation sites to facilitate a “home grown” equity-oriented systemic transformation by focusing on three outcomes:

expanded patterns of activity, corresponding theoretical concepts, and new types of agency (Engeström & Sannino, 2010). The Learning Lab activities focus on facilitating the social agency of all participants, in particular, those who have been historically marginalized and exposed to aversive, punitive, exclusionary, and reactive discipline. In this way, CRPBIS is not only mindful of, but seeks to overcome, legacies of the uses of exclusionary discipline practices as ways to control students who belong to underrepresented racial, ethnic, linguistic, and ability groups by those in dominant groups in US schools. Objectives of the locally formed solutions are developed and continuously revised by the Learning Labs members. We call this process *coalition building* where all stakeholders are involved as active co-innovators.

As connected to Learning Labs, the goal of the following four CRPBIS implementation processes is to make the supposedly “culturally-neutral” tenets of PBIS culturally responsive in order to understand and address the diverse strengths, needs, and interests of minority students and families. CRPBIS implementation teams introduce research-based culturally responsive academic and behavioral practices and tools to the Learning Labs to infuse culturally responsive practices into the four tenets of PBIS (i.e., outcomes, empirically validated practices, data-based decision making, and systems change, Sugai & Horner, 2002).

Determining Desired Outcomes of CRPBIS

The universal tier of CRPBIS is designed for emancipatory participation. All students, particularly students who have experienced systemic marginalization, engage in socially positive, academically rich, cooperative, and inclusive school cultures. In these cultures diversity across ethnicity, language, religion, sexuality, and ability is not only valued but drawn upon as learning resources for social

and academic activities to help students determine the content and direction of their learning, leading to student-driven positive personal and social change. Behavioral expectations, consequences, and support procedures become clearly defined, socially relevant, and ecologically valid for all stakeholders and the local community that the

school serves (Dunlap et al., 2009; George et al., 2009). The Lab participants link individual factors (e.g., academic and behavioral struggles and prior learning experiences) and the social structure in understanding and influencing student behaviors, academic learning opportunities, and student-adult interactions and include all stakeholders in the definition of these outcomes and a school-wide behavioral health plan. In defining the outcomes, Lab participants should conceptualize the historically evolving nature of students’ social experiences in and outside of the schools to create effective positive and supportive social and cognitive organizations of schools. For example, the concept of respect (e.g., the rule, “Be respectful.”) is grounded not only in the cultural understandings that individuals bring to school settings in relation to membership in cultural groups and individual experiences, but also within the institutional cultures of schools and day to day interactions in classrooms and historical configurations of daily tensions around how respect is defined, performed, and monitored within and outside school walls. By examining the motives for and understandings of expected school behaviors that make them relevant to

all stakeholders, CRPBIS shifts its major goal from eliminating aberrant behaviors (e.g., insubordination, noncompliant, aggression) or maintaining replacement behaviors to supporting the development of students’ and teachers’ social agency to act in innovative ways that shape their school and classroom communities.

Understanding Cultural Mediation and Implementing Culturally Responsive Research-based Practices

All learning is mediated by culture; therefore, education and educational settings are filled with cultural assumptions, rule making, and practices. Accordingly, the CRPBIS framework follows general principles of culturally responsive pedagogies: democratic, reciprocal, and inclusive school climates, collaborative learning, and culturally responsive conceptions of curricular content and knowledge generation. CRPBIS conceptualizes educational equity as “enabling youth (and children) to appropriate the repertoires they need in order to live the richest life possible and reach their full academic potential” (Nasir, Rosebery, Warren, & Lee, 2006, p. 499). Students and teachers are active social agents in their life-long learning and development. In CRPBIS, practitioners are encouraged to capitalize on students’ protective factors, such as high degrees of collaboration between educators and families as well as opportunities for extracurricular activities (George et al, 2009).

In reciprocal relationship with families, practitioners must innovatively expand the taken for granted ways of teaching the academic domains, look for the continuities of multiple practices and making connections by building bridges between in and out of school learning, and develop a deep understanding of cognitive and social strengths that non-dominant students bring. CRPBIS pays critical

attention to classroom activities. Equitable adult-student interactions—rather than highly individualistic and competitive ones—are important. Educators should expedite social interactions to “maintain fluid student-teacher relationships, demonstrate a connectedness





with all students, develop a community of learners, and encourage students to learn collaboratively and be responsible for another” (Ladson-Billings, 1995, p. 480). Therefore, culturally responsive educational practices facilitate transformational learning, the idea that students should be engaged in the enterprise of social justice as a way of expanding from a sense of justice about their own rights to the rights of communities and people (Banks & Banks, 2005).

Using Data for Continuous Improvement and Innovation

Data-based decision making is of central importance both in terms of the types of data that are collected to determine which students are in need of more intensive interventions and supports and as measures of the impact of CRPBIS on improving school climate and student behavior:

Yet, widely used academic and behavioral data tools lack construct validity for all students across various situations and contexts (Solano-Flores, 2008). With these limitations in mind, our framework uses disaggregated academic and behavioral outcome data to identify patterns of disparities but also generates data from multiple data sources and methods (Dunlap et al., 2009). CRPBIS data col-



lection, analysis, and interpretation focus on the interactions between individuals and infrastructure in order to better understand the sociological and cultural patterns of activity present in local practices and policies. Careful attention is given to the geographies of representation so that data within and outside of school are brought together in geographical representations via interactive data maps to allow patterns to be readily surfaced and identified. Through careful analysis and interpretation of complex patterns of data that show the intersections of various influences, the Learning Lab participants will be able to engage systemic transformations that remediate power and privileges within local contexts and shape learning designs for academic and social outcomes.

Ongoing Systemic Change

The fifth and last tenet of CRPBIS is systemic change. A systems approach for improving schools is predicated on the assumption that it is in the interplay between such social phenomena as race, class, age, ability, and language and institutional structures and relationships that system dynamics can be identified and the overall ability of the system to improve itself can be understood. This approach to understanding institutional or social groups uncovers how some groups, individuals or cultural practices are privileged over others. And, in understanding these dynamics, it is possible to affect the policies and practices that routinize activity in order to balance the regimes of power and privilege with those of social justice, access and equity. To make systemic change that lasts over time and exists at scale requires that the dynamics within a system are made

explicit and carefully considered as reform is crafted and carried out (Shanklin, Kozleski, Meagher, Sands, Joseph, & Wyman, 2003). Accordingly, local CRPBIS implementers need to build sustained systems-level support (outside-in) to achieve their organizational goal-related school behaviors and change (inside-out).

CRPBIS as a systemic change effort critically

focuses on the extent to which research-based culturally responsive practices are integrated; and the extent to which students, families, and community are involved in research and educational practices in every step of the process for an effective and sustainable systemic change. Effective and sustainable change is not possible in the absence of a strong connection between the inside and outside of the school (Kozleski & Smith, 2009; Fullan, 2000). While it is possible for a school to effectively implement CRPBIS for a while on its own, in order for this change to be sustained schools must be both challenged and nurtured by surrounding infrastructure. The CRPBIS processes should be united through a moral purpose aligned with capacity, resources, and a coalition of multiple voices, perspectives, and support of all stakeholders that is required for a sustained systemic transformation (Ferguson, Kozleski, & Smith, 2003; Fullan, 2006). The moral purpose of the systemic change effort via CRPBIS is for forming safe, positive, supportive, inclusive school cultures for all.

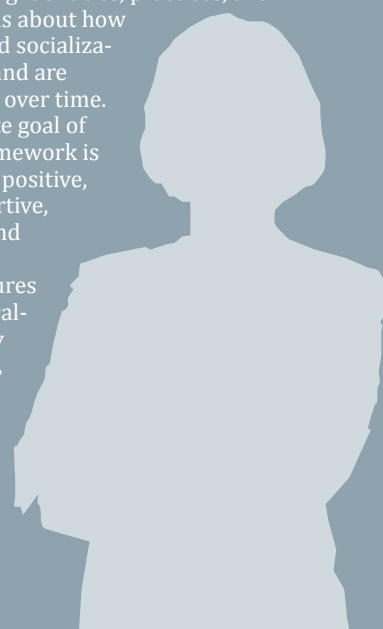
Conclusion

CRPBIS is a process-oriented framework aimed at restructuring school cultures through understanding and influencing interacting educational and socio-political processes reproducing the behavioral outcome disparities, the racialization of school discipline, and exclusion and marginalization of non-dominant students and families.



The CRPBIS implementation follows the interceptive five processes for remediating school cultures with local stakeholders by fostering social agency and continuous collective innovation of local stakeholders. Behavioral and academic prevention and intervention practices of CRPBIS aim to address the local cultural contexts and interaction patterns that undergird culturally responsive and research-based early intervening, capacity building, intensive instruction, specialized student and teacher supports, and individualized supports.

Practitioners in CRPBIS use continuous assessments for generating data that foreground school cultures (individual, institutional, and interactional factors) in order to support an inside-out transformation in how teachers and schools understand their own evolving identities, practices, and assumptions about how learning and socialization occur and are maintained over time. The ultimate goal of CRPBIS framework is to facilitate positive, safe, supportive, inclusive, and democratic school cultures via ecologically fit, locally meaningful, and socially just systemic transformation efforts.



References

- Artiles, A. J., Bal, A., & Thoriun, K. A. K. (2010).** Back to the future: A critique of Response to Intervention's social justice views. *Theory into Practice, 49*, 250-257.
- Artiles, A. J., & Kozleski, E. B. (2007).** Beyond convictions: Interrogating culture, history, and power in inclusive education. *Language Arts, 84*(4), 357-364.
- Banks, J. A. & Banks, C. A. (2005).** *Multicultural education: Issues and perspectives*. Hoboken, NJ: John Wiley and Sons.
- Dunlap, G., Sailor, W., Sugai, G., & Horner, R. H. (2009).** Overview and history of positive behavior support. In W. Sailor, G. Dunlap, G. Sugai, & R. H. Horner (Eds.), *Handbook of positive behavior support* (pp. 3-16). New York: Springer.
- Eber, L, Upreti, G, & Rose, J. (2010).** Disproportionality in school discipline through positive behavior interventions and supports (PBIS). *Building Leadership, 17*, 8, 1-10.
- Engeström, Y., & Sannino, A. (2010).** Studies of expansive learning: Foundations, findings and future challenges. *Educational Research Review, 5*, 1-24.
- Ferguson, D. L., Kozleski, E. B., Smith, A. (2003).** Transformed, Inclusive Schools: A Framework to Guide Fundamental Change in Urban Schools. *Effective education for Learners with Exceptionalities, 15*, Elsevier Science, pp. 43-74.
- Fullan, M. (2006).** *Change theory: A force for school Improvement*. Centre for Strategic Education Seminar Series Paper No. 157. Retrieved December 02, 2011 from, <http://www.cse.edu.au/Publications1.aspx>
- Fullan, M. (2000).** The three stories of education reform. *Phi Delta Kappan, 581*-584.
- George, H. P., Kincaid, D., & Pollard-Sage, J. (2009).** Primary-tier interventions and supports. In W. Sailor, G. Dunlap, G. Sugai, & R. H. Horner (Eds.), *Handbook of positive behavior support* (pp. 375-394). New York: Springer.
- Gutiérrez, K. D. (2008).** Developing a sociocritical literacy in the third space. *Reading Research Quarterly, 43*, 148-164.
- Freire, P. (2000).** *Pedagogy of the oppressed*. New York: Continuum.
- Jimerson, S. R. (2001).** Meta-analysis of grade retention research: Implications for practice in the 21st century. *School Psychology Review, 30*(3), 420-437.
- Jones, C., Caravaca, L., Cizek, S., Horner, R. H., & Vincent, C. G. (2006).** Culturally responsive schoolwide positive behavior support: A case study in one school with a high proportion of Native American students. *Multiple Voices, 9*, 108-119.
- King, K. A., Harris-Murri, N., Urso, A., Artiles, A. J., & Bal, A. (2006, November).** Making positive behavior interventions and support models culturally responsive. Teacher Educators for Children with Behavior Disorders Conference. Tempe, AZ.
- Kozleski, E. B. & Huber, J. J. (2010).** Systemic change for RTI: Embedding change within a critical framework. *Theory into Practice, 49*, 258-264.
- Kozleski, E. B., & Smith, A. (2009).** The role of policy and systems change in creating equity for students with disabilities in urban schools. *Urban Education, 44*, 427-451.
- Ladson-Billings, G. (1995).** Toward a theory of culturally relevant pedagogy. *American Educational Research Journal, 32*(3), 465-491.
- Ladson-Billings, G. (2006).** From the achievement gap to the education debt: Understanding achievement in U.S. schools. *Educational Researcher, 35*(7), 3-12.
- Nasir, N. S., Rosebery, A. S., Warren, B., & Lee, C. D. (2006).** Learning as a cultural process: Achieving equity through diversity. In R. K. Sawyer (Ed.), *The Cambridge Handbook of the Learning Sciences*. (pp. 489-504). New York: Cambridge University.
- Perez, P. (2010).** Held back: The disproportionate occurrence of low academic achievement, grade-level retention, and dropping out among high school Hispanic youth. Unpublished doctoral dissertation. University of California, Irvine. Retrieved January, 2012 from <http://gradworks.umi.com/33/98/3398954.html>.



- Shanklin, N., Kozleski, E. B., Meagher, C., Sands, D., Joseph, O., & Wyman, W. (2003).** Examining renewal in an urban high school through the lens of systemic change. *International Journal of School Leadership and Management*, 23(1), 357-378.
- Skiba, R.J., Michael, R.S., Nardo, A.C., & Peterson, R.L. (2002).** The color of discipline: Sources of racial and gender disproportionality in school punishment. *The Urban Review*, 34, 317-341.
- Skiba, R., Ritter, S., & Middelberg, (2010).** Culturally Responsive PBIS: Making School Discipline Work for All Students. Presentation at Indiana Association of School Psychologists' Annual Meeting. Indianapolis, IN.
- Solano-Flores, G. (2008).** Who is given tests in what language by whom, when, and where? The need for probabilistic views of language in the testing of English language learners. *Educational Researcher*, 37, 189-199.
- Soja E. W. (2010).** *Seeking spatial justice*. Minneapolis: University of Minnesota.
- Sugai, G., Horner, R., Dunlap, G., Hieneman, M., Lewis, T.J., Nelson, C.M., Scott, T., Liaupsin, C., Sailor, W., Turnbull, A.P., Turnbull, H., Wikham, D., Wilcox, B., & Ruef, M. (2000).** Applying positive behavior supports and functional behavioral assessment in schools. *Journal of Positive Behavior Interventions*, 2, 131-143.
- Sugai, G., & Horner, R.H. (2002).** The evolution of discipline practices: School-wide positive behavior supports. *Child and Family Behavior Therapy*, 24, 23-50.
- Sugai, G., & Horner, R. (2006).** A promising approach for expanding and sustaining the implementation of school-wide positive behavior support. *School Psychology Review*, 35, 245-259.
- Utley, C. A., Kozleski, E. B., Smith, A., & Draper, I. (2002).** Positive behavioral support: A proactive strategy for minimizing discipline and behavior problems in urban, multicultural youth. *Journal of Positive Behavior Supports*, 4, 196-207. Reprinted in: In L. Bambara, G. Dunlap, & I. Schwartz (2004). *Positive Behavior Support: Critical Articles on Improving Practice for Individuals with Severe Disabilities* (pp 388-399). Austin, TX: Pro-ED.
- Vincent, C. G., Randall, C., Cartledge, G., Tobin, T. J., & Swain-Bradway, J. (2011).** Toward a conceptual integration of cultural responsiveness and schoolwide positive behavior support. *Journal of Positive Behavior Interventions*, 13(4), 219-229.
- Vincent, C. G., & Tobin, T. J. (2010).** The relationship between implementation of school-wide positive behavior support and disciplinary exclusion of students from various ethnic backgrounds with and without disabilities. *Journal of Emotional and Behavioral Disorders*. Advance online publication. doi:10.1177/1063426610377329
- Yeskel, F. (2008).** Coming to class: looking at education through the lens of class. Introduction to the class and education special issue. *Equity and Excellence in Education*, 41(1), 1-11.
- Wang, M., McCart, A., & Turnbull, A. P. (2007).** Implementing positive behavior support with Chinese American families. *Journal of Positive Behavior Interventions*, 9, 38-51.
- Wortham, S. (2006).** *Learning Identity: The joint emergence of social identification and academic learning*. New York: NY: Cambridge University.

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Morningside Center for Teaching Social Responsibility

WHAT WE DO

Morningside Center for Teaching Social Responsibility's evidence-validated programs help all members of a school community (students, school staff, and parents) develop essential life skills and create a more positive and productive learning environment.

Schools contract with Morningside Center to implement a wide array of programs aimed at fostering students' social, emotional, and academic learning and at creating a respectful classroom and school climate. Our approach is engaging and interactive, employing small groups, skills practice, role-playing, brainstorming and discussion. We tailor our work to address the needs of each school or group so costs vary.

Our approaches include:

CLASSROOM INSTRUCTION PROGRAMS

Regular classroom lessons or sessions are the foundation for fostering students' social and emotional learning (SEL). We provide professional development to support teachers in consistently teaching our SEL curricula. Our classroom instruction programs include:



- **The 4Rs** (<http://morningsidecenter.org/node/36/>) (Reading, Writing, Respect & Resolution) for preK-8. The 4Rs develops the academic, social & emotional skills of students from pre-K through middle school by integrating SEL into the language arts curriculum. The 4Rs uses children's literature as a springboard for developing their social, emotional and academic skills.
- **Restore360** ([node/760/](http://morningsidecenter.org/node/760/)) for grades 6-12. The Restore360 Program uses restorative approaches to create a sense of community among students, build their social and emotional skills, and provide a positive alternative to punitive discipline policies that can lead to suspension.
- **Resolving Conflict Creatively** (<http://morningsidecenter.org/node/56/>) (RCCP) develops the academic, social & emotional skills of students grades K-12 through an engaging, interactive curriculum.
- **Advisories Program** (<http://morningsidecenter.org/node/38/>)

. We help schools develop and implement effective advisory programs that help connect young people to the school and build their SEL competencies.

SCHOOL-WIDE PROGRAMS

- **Smart School Leaders** (<http://morningsidecenter.org/node/63/>). We provide tailored support for principals in leading with emotional intelligence and in engaging all members of the school community in planning for and implementing schoolwide social and emotional learning (SEL).
- **Rethinking Discipline** (<http://morningsidecenter.org/node/44/>). We work flexibly with school leaders to help them align their school's approach to discipline with social and emotional learning and restorative practices, creating a school environment that is safe, calm, and caring. This can include collaborative planning and consultation to develop a new discipline plan, more targeted support to address discipline issues, as well as workshops and classroom coaching for teachers.
- **Pathways to Respect** (<http://morningsidecenter.org/node/54/>) is our research-based program for eliminating bullying in middle schools. It addresses the problem on three levels: school-wide, classroom, and individual. The curriculum component of Pathways to Respect is 4Rs for Middle School.
- **Whole School SEL (/node/795)**. We provide coaching for school leaders and help them facilitate a collaborative planning process to engage the school community in developing plans for school-wide social and emotional learning. We support the school in implementing these approaches, including a discipline policy that is aligned with SEL, classroom instruction for students, and professional development for teachers.

STUDENT LEADERSHIP PROGRAMS

We provide school-based training and support for students (K -12) in becoming leaders in their schools and communities. We also provide technical assistance to help schools set up effective student leadership programs. Our programs include:

- **Peer Mediation** (<http://morningsidecenter.org/node/47/>). Selected young people, grades 3-12, (usually 25-30 students per school) learn basic SEL skills and master a step-by-step mediation process. They then serve their schools by mediating disputes among their peers.
- **Peace Helpers** (<http://morningsidecenter.org/node/47/>). Students from grades K-2 work with their teachers to establish classroom Peace Corners and help their classmates address problems and conflicts.
- **Diversity Panels** (<http://morningsidecenter.org/node/47/>). Panels made up of students representing various forms of diversity make classroom presentations to trigger discussion of how the school can ensure respect for all.

AFTER-SCHOOL PROGRAMS



- **PAZ (Peace from A to Z) After-School Program @ P.S. 24** (<http://morningsidecenter.org/node/39/>) serves 240 children in Sunset Park, Brooklyn with a program of conflict resolution instruction, cooperative sports, arts, community service, and homework help. PAZ @ P.S. 24 operates from 3-6 every school day afternoon and all day during 20 school holidays and the summer.
- **PAZ @ P.S. 214** (<http://morningsidecenter.org/node/39/>) serves over 700 students (grades K-8) in the Bronx with a rich program of academic enrichment, social and emotional learning, arts and other projects.

STAND-ALONE WORKSHOPS

- Our staff developers provide engaging, interactive stand-alone workshops for school staff, including teachers, guidance counselors, and school aides. Each year, we facilitate two-day **Respect for All workshops** (<http://morningsidecenter.org/node/46/>) to help them counter bullying, especially of lesbian and gay young people. These awareness and skill-building workshops are a collaboration with the NYC Department of Education.
- Our **Peace in the Family** (<http://morningsidecenter.org/node/48/>) workshops help parents develop skills in communication and problem-solving so they can build strong, collaborative relationships with their children, and connect with the school and each other.

COLLABORATION WITH RESEARCHERS

Morningside Center collaborates with researchers to evaluate the impact of our programs and contribute knowledge to the field. Current research collaborations include The 4Rs Research Project and 4Rs-My Teaching Partner, a project with the University of Virginia to develop an intensive model of staff development for the 4Rs.

TEACHABLEMOMENT

The teacher resource section of our website, **TeachableMoment** ([teachable-moment](http://morningsidecenter.org/teachable-moment/)), offers educators timely, inquiry-oriented classroom lessons on current issues and social and emotional learning. Hundreds of thousands of educators download our lessons each year.

*Morningside Center works flexibly to meet the needs of schools. For more information, please **contact us** ([contact-us-0](mailto:contact-us-0@morningsidecenter.org)).*

Improving Classroom Quality: Teacher Influences and Experimental Impacts of the 4Rs Program

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This study capitalizes on recent advances in the reliable and valid measurement of classroom-level social processes known to influence children's social-emotional and academic development and addresses a number of limitations in our current understanding of teacher- and intervention-related impacts on elementary school classroom processes. A cluster randomized controlled trial design was employed to (a) examine whether teacher social-emotional functioning forecasts differences in the quality of 3rd-grade classrooms, (b) test the experimental impact of a school-based social-emotional learning and literacy intervention on the quality of classroom processes controlling for teacher social-emotional functioning, and (c) examine whether intervention impacts on classroom quality are moderated by these teacher-related factors. Results indicated (a) positive effects of teachers' perceived emotional ability on classroom quality; (b) positive effects of the 4Rs Program on overall classroom quality, net of teacher social-emotional functioning indicators; and (c) intervention effects that are robust to differences in these teacher factors. These findings support and extend recent research examining intervention-induced changes in classroom-level social processes fundamental to positive youth development.

Keywords: classroom quality, classroom emotional and instructional climate, randomized trial, social-emotional learning, school-based intervention

Increasingly, school-based intervention and whole school reform efforts aim at identifying, assessing, and effecting changes in classroom-level processes associated with or predictive of children's social-emotional and academic development (Hamre &

Pianta, 2005; Pianta, 2006; Raver et al., 2008; Rimm-Kaufman, La Paro, Downer, & Pianta, 2005). These classroom processes are fundamentally social in nature, reflect the underlying quality of the interactions among teachers and students, and encompass emotional, instructional, and organizational dimensions of classroom experience. Indeed, in the absence of improving such social processes, other resources such as qualified teachers or costly curricular materials may be ineffective in promoting learning and achievement (Cohen, Raudenbush, & Ball, 2003; Fullan, 2001). Reliable and valid methods and measures for assessing important classroom-level social processes have recently been developed and are gaining use in the research community (Pianta, La Paro, & Hamre, 2008).

Little is currently known, however, about the ability of school- and classroom-based interventions to successfully alter these social dimensions of classroom settings, particularly in poorly functioning classrooms. To date, only one study has provided experimental evidence of the positive impact of a planned intervention on elements of the emotional and organizational climate of the classroom (Raver et al., 2008). The Raver et al. (2008) study focused on behavior management training and weekly classroom visits by mental health consultants in Head Start-funded preschool programs. The present study is the first to our knowledge that uses a cluster randomized controlled trial design to test the causal impact of a universal, school-based preventive intervention—the 4Rs (Reading, Writing, Respect, and Resolution) Program—on the quality of the emotional, instructional and organizational processes of elementary school classrooms. Developed and run by a

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creative group of innovators in public education, the Morningside Center for Teaching Social Responsibility (formerly Educators for Social Responsibility, Metropolitan Area, or ESR Metro), the 4Rs Program trains and provides ongoing coaching to teachers in the implementation of an integrated social-emotional learning and literacy curriculum.

A Theoretical Framework for Classroom Settings as Targets of Intervention Research

Dynamic contextual models view children's development as taking place in a nested and interactive set of contexts ranging from the most immediate microcontexts to the more distal meso- and exocontexts. Individual experience and behaviors are dynamically mediated by numerous proximal processes (Bronfenbrenner & Morris, 1998; Sameroff, 1995). In microcontexts (e.g., family, classroom, and school), among the most salient proximal processes are those that involve important relationships (Pianta, 1999). Children experience classrooms through their relationships with their teachers and with their peers, and together children and teachers contribute to a dynamic and enduring set of interactions characterized by regular and consistent patterns (Kontos & Wilcox-Herzog, 1997; Meehan, Hughes, & Cavell, 2003; Meyer, Wardrop, Hastings, & Linn, 1993; Pianta, 1999; Pianta & Stuhlman, 2004). This set of relationships in aggregate constitutes the culture and climate of the classroom environment for all children. Teacher-student relationships are a joint function of the unique characteristics of children (e.g., their social-cognitive attributions and problem-solving style) and teachers (e.g., their social-emotional abilities and experiences of job stress and burnout) and the cultural norms, values, and practices they bring to the relationship and to the classroom. Together these characteristics contribute to the climate of the classroom.

From large-scale studies employing multilevel analyses, we know there exists significant classroom-level variation in student learning and achievement (Nye, Konstantopoulos, & Hedges, 2004) and that differences in student learning across years is linked to children's experiences in specific classrooms (Hamre & Pianta, 2005). Only recently, however, has a broad theory of the classroom-level mechanisms that link students' experiences in their classrooms to their academic and social-emotional development been elucidated and validated. This conceptualization and operationalization of classrooms, known as the Classroom Assessment Scoring System (CLASS) Framework (Hamre & Pianta, 2007; Hamre, Pianta, Mashburn, & Downer, 2007), focuses on proximal processes in classroom settings (Bronfenbrenner & Morris, 1998) and posits three broad domains of classroom interactions involving teachers and students: emotional support, classroom organization, and instructional support. These broad domains, each comprising a number of specific dimensions of interactions, have been linked to the promotion of student learning (Pianta, Belsky, Vandergrift, Houts, & Morrison, 2008) and social-emotional development (Hamre & Pianta, 2005), have been found to be sensitive to intervention-based changes in preschool (Head Start) teacher practices (Raver et al., 2008), and are the focus of the present investigation.

Evidence of the Developmental Importance of Classroom Climate

Prior research on classroom climate varies in definitional features but suggests that classroom climate influences children's social-emotional and academic outcomes. Positive classroom climate has been associated with greater self-esteem, perceived cognitive competence, internal locus of control, mastery motivation (R. M. Ryan & Grolnick, 1986), school satisfaction (Baker, 1999), academic performance, and less acting-out behavior (Toro et al., 1985), whereas poorer classroom environments have been associated with poor peer relations, poor academic focus, and higher levels of aggression (Kellam, Ling, Merisca, Brown, & Ialongo, 1998; Maslach, Jackson, & Leiter, 1996). Research has also identified teacher-child relationships as an essential process feature that contributes to classroom quality (National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network [ECCRN], 2003; Pianta, La Paro, Payne, Cox, & Bradley, 2002). However, a limitation of these earlier studies is that they often use measures such as checklists and analyses based on composite scores so that specific, observable classroom processes are not adequately captured. Recent improvements in measures of classroom processes include observational tools such as the Classroom Observational System (NICHD ECCRN, 2002) and the CLASS (Pianta, La Paro, & Hamre, 2008). Observational tools have the advantage of avoiding biases associated with teachers' ratings of their own classrooms and allow for the assessment of dimensions that are not possible for children to rate (e.g., the degree to which teachers use discussions and activities to promote higher order thinking skills). The CLASS in particular has provided a critical link between important domains of classroom processes and behaviorally anchored metrics of those processes such that they can be reliably observed and rated by independent observers (Hamre et al., 2007).

Assessing classroom processes using this observational instrument has now yielded evidence that in early schooling, exposure to classrooms marked by high-quality emotional and instructional interactions between teachers and students is associated with both social and academic development. For example, Hamre and Pianta (2005) found that by the end of first grade, children identified as at risk based on demographic characteristics (i.e., maternal education) and functional characteristics (i.e., behavioral, attentional, academic, and social) and whose classrooms were rated in the spring as high in instructional and emotional support showed gains in achievement (i.e., Woodcock-Johnson Psycho-Educational Battery-Revised) and relational functioning (i.e., teacher-child relationship quality) such that their scores were similar to those of their low-risk peers. In contrast, at-risk students in classrooms rated as having lower levels of support performed significantly worse than their low-risk peers. This study and its design not only highlight the conceptual and empirical distinction between systematically observed teacher-based supports in emotional and instructional interactions across the classroom from child-level behavioral features, but also provide evidence that emotionally and instructionally supportive classrooms can promote children's healthy social-emotional development and academic success.

Importance of Teacher Social–Emotional Functioning for Classroom Processes and Child Outcomes

One fundamental and largely unaddressed gap in the literature concerns whether and how classroom quality processes are influenced by aspects of teachers' own social–emotional functioning. A variety of teacher social–emotional experiences, beliefs, and skills have been identified as potential sources of influence on the development of children's social and/or academic competence: teachers' orientation toward their own professional development (Adalbjarnardottir & Selman, 1997; Selman, 2003), their perceptions of their role in attending to students' social–emotional needs (Daniels & Shumow, 2003; A. M. Ryan, Gheen, & Midgley, 1998), their interest and ability in forming close relationships with their students (Hamre & Pianta, 2001; Ladd & Burgess, 1999; Pianta, Steinberg, & Rollins, 1995), their experience of stress associated with individual student behavior and feelings of job burnout overall (Abidin & Robinson, 2002; Barbaresi & Olson, 1998; Emmer & Stough, 2001; Gold, 1984; Greene, Beszterczey, Katzenstein, Park, & Goring, 2002; Maslach et al., 1996; Yoon, 2002), their classroom management styles and strategies (Webster-Stratton, Reid, & Hammond, 2001; Wentzel, 2002), and their skill in promoting reading comprehension, word analysis, and writing skills (Rowan, Correnti, & Miller, 2002). Although psychological characteristics of teachers such as depression and attitudes about children and child-rearing have been linked to their behavior and the quality of their interactions with children in early child care and prekindergarten classroom settings (Hamre & Pianta, 2004; Pianta, Howes, et al., 2005), the degree to which such characteristics and other social–emotional experience, beliefs, and skills are linked to teachers' ability to establish and maintain sensitive, well-regulated, and instructionally engaging classrooms in elementary school is little understood (Pianta, Howes, et al., 2005).

Whether teachers believe they have relevant skills in perceiving, understanding, and regulating their own emotions and whether they feel stressed and overwhelmed by their work may have direct implications for the quality of the interactions that teachers have with their students as well as for the effectiveness of classroom- and school-based interventions to promote teachers' ability to develop and maintain high-quality interactions in their classrooms (Conduct Problems Prevention Research Group [CPPRG], 1999). A recent study of variation in profiles of classroom quality among a large sample of state-funded prekindergarten programs found few and inconsistent associations between profiles of classroom quality and several teacher sociodemographic characteristics (e.g., age, years of education and teaching experience, credentials in early childhood education). But indicators of teachers' own social–emotional functioning were not examined (LoCasale et al., 2007). In the present study, we aimed to extend the research in this area by examining the direct effects of key features of teacher social–emotional functioning (perceived emotional abilities, professional burnout) on the quality of classroom processes and whether these factors moderate the impact of classroom-focused intervention on classroom quality.

The Impact of Interventions on Features of Classroom Settings

The extant research suggests that important relational dimensions of classroom and school environments may be malleable by

interventions such as the 4Rs Program. For example, the Fast Track prevention program, a social competence intervention delivered by first-grade teachers, produced significant positive effects on summary ratings by observers of four aspects of the entire classroom atmosphere: expressing feelings appropriately, following rules, staying focused and on task, and level of interest and enthusiasm (CPPRG, 1999). The Child Development Project, a comprehensive elementary school intervention, found that students' sense of their classroom as a community (students' perceptions of the classroom and school environment as supportive, caring, and welcoming of student participation) was higher for students in the randomly assigned group of program schools than for those in the group of comparison schools (Solomon, Watson, Battistich, Schaps, & Delucchi, 1996). The Comer School Development Program has been associated with changes in students' perceptions of school social and academic climate (Cook, Murphy, & Hunt, 2000), and other programs that specifically targeted and assessed changes in the classroom setting have also shown positive effects on classroom climate in elementary schools (Fraser & O'Brien, 1985). Most recently, a quasi-experimental test of the Responsive Classroom intervention among elementary school children, focusing on teaching principles and practices that integrate social and academic learning, found positive intervention impacts on children's perceptions of their classroom (Brock, Nishida, Chiong, Grimm, & Rimm-Kaufman, 2008). Similarly, Raver et al.'s (2008) Chicago School Readiness Project (CSRP) found that Head Start–funded preschool programs randomly assigned to receive behavior management training for classroom teachers coupled with weekly in-class mental health consultants were rated by independent observers as having significantly higher levels of positive classroom climate, teacher sensitivity, and behavior management than control classrooms.

Taken together, this research suggests the potential of school-based interventions such as the 4Rs Program to positively alter a range of relational features of classroom settings assessed in a variety of ways including direct observation and aggregated student perceptions. This research, however, is limited in a number of important ways. First, few studies have used school randomized experimental designs to specifically test the impact of such interventions on the quality of classroom processes. Notable exceptions are the Fast Track (CPPRG, 1999) and CSRP (Raver et al., 2008) interventions, each of which randomly assigned either whole elementary schools or preschool programs to intervention and control conditions and explicitly targeted and assessed intervention impacts on classrooms (see below). In contrast to quasi-experimental designs, cluster randomized controlled trial designs are increasingly considered the gold standard for estimating differences in school or classroom quality due to the introduction of a new program or set of practices. By randomly assigning whole organizational units (clusters; e.g., schools) to intervention and control conditions, typical threats to internal validity (e.g., selection processes, contamination) are minimized, thereby allowing for greater confidence in causal inferences (Bloom, 2005; Shadish, Cook, & Campbell, 2002).

Second, indices of classroom environments have typically been derived from and operationalized at levels lower than that of the classroom itself, with unaggregated student-level perceptions of classroom climate used to represent classroom-level phenomena without consideration for the nonindependence of student self-

reports due to the clustering of students within classrooms (Brock et al., 2008; Cook et al., 2000; Fraser & O'Brien, 1985; Solomon et al., 1996). Here, too, the Fast Track (CPPRG, 1999) and CSRP (Raver et al., 2008) studies are notable exceptions in that each used the ratings of independent observers to operationalize the quality of classroom functioning and estimated the impacts of the intervention at the classroom level. Third, although these two studies clearly document the effects of interventions on classroom processes in early childhood and early elementary school classrooms, respectively, no experimental studies have been identified that test the impact of intervention on middle elementary school classrooms. Fourth, no studies to date have tested the impact of interventions on classroom social processes after controlling for key teacher sociodemographic factors and/or characteristics of teachers' social-emotional functioning, or examined whether these factors moderate the effects of intervention on the quality of classroom processes.

In the present study, we addressed each of these limitations. We employed a school-randomized controlled design to examine two sets of influences on classroom quality. Specifically, we (a) examined whether teacher social-emotional functioning (perceptions of emotional ability, burnout) forecasts differences in the quality of third-grade classrooms; (b) tested the experimental impact of a school-based social-emotional learning and literacy intervention on the quality of classroom processes (independent observation-based ratings of classroom quality), controlling for teacher social-emotional functioning; and (c) examined whether intervention impacts on classroom quality are moderated by these teacher-related factors.

The 4Rs Intervention

The 4Rs Program¹ is a school-based intervention in literacy development, conflict resolution, and intergroup understanding that trains and supports all teachers in kindergarten through fifth grade in how to integrate the teaching of social and emotional skills into the language arts curriculum. It is considered a universal intervention in that it targets and is implemented with the entire teacher and student population of a given school (Institute of Medicine, 1994). Through the program, teachers learn how to use high-quality children's literature as a springboard for helping students gain skills and understanding in the areas of handling anger, listening, assertiveness, cooperation, negotiation, mediation, building community, celebrating differences, and countering bias. By focusing on basic human themes of conflict, feelings, relationships, and community, the 4Rs curriculum adds social and emotional meaning and depth to rigorous literacy instruction. The 4Rs Program provides a pedagogical link between the teaching of conflict resolution and the teaching of fundamental academic skills, thereby capitalizing on their mutual influence on successful youth development (Hinshaw, 1992; Jones, Brown, & Aber, in press).

The 4Rs Program was developed 5 years ago by the Morningside Center for Teaching Social Responsibility in direct response to several national and local policy shifts. From a national perspective, the 4Rs evolved in response to the tension between the movement to reform education between standards-based accountability with its focus on academic achievement, on the one hand (e.g., the policy and practice zeitgeist promoted by the No Child

Left Behind Act of 2001), and social and character development, on the other, with its focus on social-emotional competence and prosocial and negative attitudes and behaviors (e.g., the growing recognition of social-emotional skills as critical to school success; Collaborative for Academic, Social, and Emotional Learning, 2003). From a local perspective, the 4Rs evolved in response to the dramatic reorganization of schools and districts in its local city and the new requirement that city schools adopt a balanced literacy approach to reading that integrates both phonics and whole language approaches to literacy promotion. By integrating the conflict resolution lessons into a curriculum that employs this approach, Morningside Center made it possible for schools to adopt the program into an increasingly tightly scheduled school day by embedding it in the new regularly scheduled balanced literacy block.

Importantly, the 4Rs Program targets several key features of settings identified by the National Research Council and the Institute of Medicine as critical to the promotion of positive youth development (National Research Council & Institute of Medicine, 2002), including (a) the building of secure and supportive relationships between children and teachers and among all school staff; (b) a pedagogy reflecting the values of inclusion, belonging, and the celebration of diversity; (c) the establishment of positive social norms that emphasize individuals' contribution to and support of the classroom and school community while respecting each person's ideas and autonomy; (d) the development and maintenance of clear and consistent rules with appropriate and predictable mechanisms for control and limit setting in classrooms and schools overall; and (e) a focus on the learning and practicing of key developmentally appropriate and relevant skills through a variety of instructional techniques. In short, the 4Rs Program aims to promote caring classroom communities marked by consistent and positive rules and norms, and safe and secure environments that convey respect for student diversity, ideas, and autonomy.

The 4Rs Program has two primary components: (a) a comprehensive seven-unit, 21–35 lesson, literacy-based curriculum in conflict resolution and social-emotional learning (provided to teachers in a standardized, grade-specific teaching guide); and (b) 25 hours of training followed by ongoing coaching of teachers to support them in teaching the 4Rs curriculum with a minimum of 12 contacts in one school year. The program's theory of change emphasizes the role of introducing teachers to a set of social-emotional learning skills and concepts and then supporting them in the use of these skills and concepts in their everyday interactions in the school with one another, with school administrators, and with the children in their classrooms through the consistent teaching of lessons from the 4Rs curriculum.

The intensive professional development activities provided to teachers to support their use of the curriculum consist of 5 days of training that take place just prior to the beginning of the school year and/or within the first 2 weeks after school begins as teachers are working to establish their classroom communities and routines. This training is then followed by ongoing classroom coaching by

¹ None of the authors have any financial interest in, or have taken funds from any publisher or organization with a vested interest in the 4Rs Program or the organization responsible for the development of the program, the Morningside Center for Teaching Social Responsibility.

trained program staff developers. Teacher training emphasizes both individual and collective learning and support for sustained program implementation. Thus, teachers are trained in large groups and in individual sessions; they receive individually tailored ongoing support but also work in within- and cross-grade groups to coordinate and align curriculum implementation, share experiences and complementary activities, and plan as a cohesive unit. The introductory training is designed to (a) introduce the teachers to the curricular units and the specific lessons and activities tied to each unit, (b) give them an opportunity to practice conflict resolution skills at the adult level through role play and experiential learning, and (c) inspire them to employ the ideas and skills embodied in the curriculum in their own lives both professionally and personally.

Ongoing classroom coaching encompasses modeling of class lessons and workshops led by program staff developers, coplanning and teaching of lessons by the teacher and staff developer, and, finally, lesson observations and feedback. In addition, staff developers convene regular conferences with teachers either in a one-on-one format or with a group of teachers from one or multiple grades.

At its core, the program's theory of change involves helping teachers more deeply assimilate, find utility in, and become skilled at practicing the concepts of the 4Rs Program in their own lives and teaching them in their classroom through the consistent delivery of lessons from the 4Rs curriculum and the provision of greater social-emotional learning opportunities in which students can practice the component skills and be supported in applying them in real-life situations. Teachers' beliefs and their willingness and ability to implement specific classroom intervention models may influence both the quantity and the quality of program implementation as well as the effectiveness of the intervention itself (CPPRG, 1999; Elias et al., 1997; Fullan, 2001; Hauer, 2003). When teachers embrace and practice the program's principles and implementation strategies, they establish a set of expectations and norms for behaviors in their classrooms, and children begin using those skills and behaviors. Teachers who practice good listening skills (e.g., direct eye contact, paraphrasing, acknowledging comprehension) during interactions with their students and other adults, and who can teach these skills and provide real-life, real-time examples of how they are effective, increase the likelihood that their students will employ them in their own interactions. But it is not merely the practice of good listening skills by the teacher or any given student that is important; it is how the use of these skills reflects a set of transactional social processes in the classroom that enable teachers and students to develop the closer and more supportive relationships believed to underlie children's long-term adjustment and learning (Hamre & Pianta, 2001; Pianta, 2006; Tseng & Seidman, 2007). Therefore, central to the program's theory of change is that teachers are successfully engaged in serving as the gateway to changing broad characteristics of classrooms including relationships and climate, as well as in the development of individual children.

There are a number of emergent studies that have documented the positive impacts of school-based intervention efforts on child-level outcomes, specifically the promotion of children's social, emotional, and academic development (e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2009; Flannery et al., 2003; Jones, Brown, & Aber, *in press*; Jones, Brown, Hoglund, & Aber,

in press). There also now exists a substantial knowledge base regarding the features of children's social settings (including classrooms and schools) that foster such positive development (National Research Council & Institute of Medicine, 2002). However, relatively little is known about the way these features of settings develop and function, or how they can be promoted by interventions that directly target not individual children *per se* but these processes and practices of the settings themselves (Tseng & Seidman, 2007). In the present study, we addressed this critical gap in the research literature. We focused on a rigorous test of an intervention that explicitly targets the quality of classroom settings through the training and ongoing coaching and support of the primary classroom facilitator, the teacher. We directly tested the causal impact of this setting-level intervention on a limited but important set of classroom social processes while controlling for important features of teachers' own social-emotional functioning. Ours is the first study to report experimental effects of the 4Rs Program on the quality of key classroom processes after one year of exposure to the program.

The primary questions addressed in this article are (a) How do characteristics of teacher social-emotional functioning, including self-reports of emotional abilities and experiences of job-related burnout, forecast differences in the emotional, instructional, and organizational quality of third-grade public school classrooms? (b) What is the experimental impact of the 4Rs Program on the emotional, instructional, and organizational quality of classrooms controlling for teacher social-emotional functioning indicators? (c) Is the impact of the 4Rs Program on classroom quality moderated by teachers' social-emotional functioning?

On the basis of prior research review, it is expected that classrooms of teachers with higher self-reported emotional abilities and lower levels of job burnout at the beginning of the school year will be rated by independent observers as higher in emotional, instructional, and organizational quality at the end of the school year. It is also expected that classrooms in the 4Rs intervention schools will have higher average levels of emotional, instructional, and organizational quality at the end of the year than classrooms in the control schools. Finally, it is expected that 4Rs intervention effects on classroom emotional, instructional, and organizational quality will be robust across teachers with varying levels of social-emotional functioning.

Method

Participants

Participants were 82 third-grade teachers and 82 classrooms in 18 public urban elementary schools in a large metropolitan city in the eastern United States. These teachers and their classrooms are part of a 3-year (six-wave) longitudinal, experimental evaluation of a universal, schoolwide literacy and social-emotional learning prevention program (4Rs) in nine intervention ($n = 37$; 45.1%) and nine control schools ($n = 45$; 54.9%). The larger study aims to test the short-term, longitudinal impact of the 4Rs Program on both child-level and setting-level outcomes. Data for the present study came from these 82 teachers and classrooms during the first year of this larger 3-year study. Baseline teacher report data on social-emotional functioning were gathered in the fall (2004) from 78 teachers, and follow-up data, including independent observa-

tions and ratings of classroom processes, were collected in the spring (2005) from the same teachers plus an additional four teachers. There was no teacher attrition from fall to spring.

Table 1 presents these general baseline classroom and teacher sociodemographic characteristics by intervention and control schools. Classrooms ranged in size from 4 to 27 students with an average of 18 ($SD = 4.7$), and average class size did not differ between treatment and control school classrooms. Four percent of classrooms were bilingual (two in treatment schools and two in control schools), 6% were team taught (teacher data were collected from just one primary teacher in these cases, and team-taught classrooms were evenly split between treatment and control schools), and 18% were special education classrooms. Child-level data are not included in this analysis; however, classrooms included children representing the typical demographics of public schools in this northeastern urban school district (from diverse racial-ethnic groups and primarily low-income families). According to teacher reports, teachers ranged in age from 23 to 61 years with an average of 36.3 years ($SD = 9.7$) and had an average of 7 years ($SD = 5.81$) of teaching experience, with an average of 4.9 years' experience in their current school. A large majority of teachers were female (94%). Teachers' racial-ethnic backgrounds were as follows: 20% Hispanic/Latino, 27% Black/African American, 51% non-Hispanic White, and 2% representing other racial-ethnic groups (e.g., Asian, Pacific Islander, Native American).

School selection and randomization. In the planning year, 18 schools were identified, pairwise matched, and randomly assigned to 4Rs intervention or control conditions (nine schools to each). Building on the long-standing relationships in the school community developed by the 4Rs Program practitioners at the Morningside Center for Teaching Social Responsibility, 41 schools were originally identified by district-level instructional supervisors as potential participants in the 4Rs Child-Level Study. The goal was the identification of candidate schools that, if selected to participate in the study, were not so high functioning that

change due to the 4Rs would not be evident or so poorly functioning that they would not be able to engage in whole school implementation of the program. Twenty-four of these 41 schools agreed to the process of matching and randomization to intervention or control conditions.

Prior to randomization, we employed a pairwise matching procedure to ensure demographic similarity of intervention and control groups. Specifically, we used an algorithm to compute the distance from each school to every other school along 20 dimensions of demographic and school characteristics likely to be related to the outcome variables of interest. All variables employed, with the exception of a measure of Organizational Readiness, were drawn from the 2001–2002 administrative databases maintained by the local department of education. These variables were selected to represent a number of important dimensions related to the outcomes targeted by the intervention such as the number of students, percentage of students receiving a free lunch, racial and ethnic composition, student attendance and achievement, average spending per student, and teacher experience. The measure of Organizational Readiness was developed collaboratively by ESR Metro (currently Morningside Center for Teaching Social Responsibility) and the principal investigators of this study and completed for all 41 of the schools that participated in the initial recruitment process. The measure included a number of dimensions such as principal leadership style, openness of communication, administrative or teacher buy-in, administrative and staff stability, number and degree of other programs, demands on teacher time, and amount of professional development as well as overall ratings of readiness.

To conduct random assignment of matched pairs to 4Rs intervention and control groups, we employed a MATLAB uniform random numbers generator to generate, in sequence, 12 random numbers ranging from 0 to 1 that were assigned to the first school in each of the 12 pairs (24 schools were recruited to participate in this study, 18 as study schools and 6 as backup schools). The first

Table 1
Sample Demographic Characteristics by Intervention and Control Schools

Demographic	Intervention ($n = 45$)				Control ($n = 37$)				Total ($N = 82$)			
	n	%	M	SD	n	%	M	SD	n	%	M	SD
Classroom characteristics												
Class size			17.27	4.84			18.30	4.47			17.73	4.67
Special education	9	20.0			6	16.2			15	18.2		
Bilingual ^a	2	5.1			1	3.1			3	4.2		
Team taught	2	4.4			2	5.4			4	4.9		
Teacher age (years) ^b			35.27	9.59			37.49	9.87			36.28	9.72
Teacher gender												
Female	41	91.1			36	97.3			77	93.9		
Male	4	8.9			1	2.7			5	6.1		
Teacher race/ethnicity												
Non-Hispanic, White	23	51.1			22	59.5			45	54.9		
Hispanic/Latino	9	20.0			3	8.1			12	14.6		
Black/African American	12	26.7			10	27.0			22	26.8		
Other	1	2.2			2	5.4			3	3.7		
Teaching experience (years)			5.69	4.25			8.59	7.01 ^c			7.00	5.81

Note. Range: class size = 4–27; teacher age = 23–61; teaching experience = 1–30.

^a Based on 71 classrooms due to missing data. ^b Based on 81 classrooms due to missing data. ^c Significantly higher for control group compared with intervention group, $F(1, 80) = 5.35, p < .05, \eta^2 = .25$.

school in each pair was assigned to the treatment or control group based on the randomly generated number, and the second school in the pair was, therefore, assigned to the other group. After random assignment, the two groups were compared across the 20 demographic and school characteristics employed in the matching procedures. As expected, the two groups did not differ significantly on any of these characteristics, and eta-squared values (the proportion of variance in each dimension explained by differences between the two groups) were minimal. Because the final set of 18 schools was not randomly selected from the initially recommended pool of 41 schools, nor drawn randomly from the entire population of elementary schools in this city, the external validity or generalizability of the results from the present study is compromised. However, the success of our rigorous matching and random assignment procedure, as evidenced by the lack of any significant demographic differences between intervention and control schools, gives us confidence that our results represent an internally valid test of intervention effects on classroom quality.

On the basis of these statistics, the schools can be described as racially and ethnically diverse, composed primarily of students who receive a free school lunch, and characterized by attendance rates over 89% and one-year stability rates that range from 86% to 95%. Further, children in these schools are highly representative of children in all public elementary schools in this large northeastern metropolitan city according to these dimensions.

4Rs Program implementation. Implementation of the two primary components of the 4Rs Program (teacher training and coaching, curriculum delivery) was systematically tracked and monitored. During the first year of implementation, teachers on average delivered three quarters of a lesson in the 4Rs curriculum per week, with the majority closer to the benchmark of one lesson per week. Further, the majority of teachers appear to have spent on average between 20 and 25 total hours (~40 min per week) implementing the 4Rs curriculum throughout the year beyond the time they spent in training. Teachers in the nine intervention schools received on average 2.4 days ($SD = 0.33$) of training in the delivery of the 4Rs curriculum, and schools received an average of 38 days (range: 21–52; $SD = 9.6$) of coaching by 4Rs staff developers. Although there is variability in 4Rs implementation between teachers and schools, this variation is not inconsistent with similar programs and evaluation studies that focus on public schools (e.g., Kam, Greenberg, & Walls, 2003).

Procedure

At the start of the school year, meetings were held with all third-, fourth-, and fifth-grade teachers in the 18 participating schools where detailed study information was provided, and consent forms were distributed. Of the 96 eligible third-grade teachers, four teachers denied consent to participate in the study, for a teacher consent rate of 96%. An additional 10 teachers were excluded from the present analysis, as they were missing classroom observation or teacher report data due to their teaching role being that of a support teacher or teacher aide or their not having any student participants in their classroom. Teachers completed questionnaires rating the language and literacy skills, social competence, and externalizing problems of each child in their class with consent to participate (although these data are not included in the present study). Teachers also completed questions rating the

climate of their school and their own social and emotional skills and behaviors, including their professional background and development, their beliefs about the importance of social-emotional learning in school, their classroom management strategies and styles, and their experiences of stress and burnout. Teachers were compensated at \$36.50 per hour for their time completing surveys at each assessment—a rate comparable to the teacher union's negotiated per session compensation rate at the outset of the study.

Observers conducted classroom observations to assess classroom climate using the observational tool, the CLASS (Pianta, La Paro, & Hamre, 2008). Observations were conducted by 15 multiracial–multiethnic members of the research team who completed a 2-day CLASS training and reliability testing session. Prior to training, observers read a detailed manual with extensive descriptions of dimensions and rating anchor points. The 2-day training workshop consisted of guided practice in the coding of videotaped classroom footage. At the end of the second training day, each observer had to pass a reliability test that involved watching and coding five videotaped classroom segments. Criteria for passing were at least an 80% match (within one scale point) of a set of master codes on the global scales. All observers passed this criterion at the end of the second training session day or within the following 1–2 weeks, in all cases prior to being certified to conduct observations in the field.

Subsequently, observers were scheduled to conduct observations in all intervention and control study schools. Observers were kept blind to school intervention status. Observations were scheduled in 2-hr blocks during regular “instructional” time. Observers conducted four 20-min observational segments each followed by a 10-min coding segment.

To obtain observational data that best represented the typical climate of each classroom, observers followed strict guidelines, including observing only instructional time (e.g., no testing or test preparation, no parties) and during times when classroom composition would be considered typical (e.g., the regular classroom teacher is not only present but also in the primary instructional role, with the majority of regular students also present). If an observation was scheduled for a time during which there were significant irregularities in classroom composition or routine (e.g., a substitute teacher or different teacher, such as a literacy specialist, was leading a lesson rather than the classroom teacher, or a large portion of students were out of the room due to trips), the observation was rescheduled. For team-teaching classrooms, classroom observers focused on both teachers but gave greater weight to groups or activities involving the largest number of students. Although a 20-min segment might occasionally be interrupted or cut short (due to fire drills, changes in schedule, etc.), shortened segments needed to be at least 10 min in length for the codes to be considered valid. For 89% ($n = 73$) of classrooms, four observation segments were obtained, and for 11% ($n = 9$) of classrooms, two to three segments were obtained.

Measures

All scale scores were computed as the mean across the items for each construct. Basic psychometrics and mean levels for each construct in the spring of third grade are presented in Table 2, by intervention and control groups. Intercorrelations among all study variables are presented in Table 3.

Table 2

Psychometric and Descriptive Data for Classroom Climate Scales by Intervention and Control Schools in Spring 2005

Variable	α	ICC	Range	<i>M (SD)</i>		
				Intervention (<i>n</i> = 45)	Control (<i>n</i> = 37)	Total (<i>N</i> = 82)
Overall classroom quality	.93	.16	1.58–6.33	4.70 (1.04)	4.25 (0.77)	4.50 (0.94)
Classroom emotional support	.90	.15	1.63–6.38	4.96 (1.06)	4.55 (0.84)	4.77 (0.98)
Classroom instructional support	.90	.11	1.19–6.13	4.02 (1.31)	3.38 (0.99)	3.73 (1.21)
Classroom organization	.83	.13	1.58–6.67	4.79 (1.14)	4.45 (0.84)	4.64 (1.03)

Note. ICC = intraclass correlation at school level.

Classroom climate. Classroom climate was assessed with the CLASS (Pianta, La Paro, & Hamre, 2005, 2008). The CLASS is an observational instrument developed to assess classroom quality in preschool through fifth grade. The measure is based on developmental theory and research that suggest that it is through proximal processes in classroom settings (Bronfenbrenner & Morris, 1998), specifically the quality of the interactions among students and teachers that occurs on a daily basis (Pianta, 1999), that students are afforded opportunities to experience positive connections to their peers and teachers in well-regulated, organized classroom settings with instructional activities that are intentional, focused, and oriented around high-quality feedback loops, and that such experiences are the primary mechanisms promoting positive student development and learning (Cameron, Connor, & Morrison, 2005; Emmer & Stough, 2001; Greenberg, Domitrovich, & Bumbarger, 2001; Hamre & Pianta, 2001; Howes et al., 2008; Morrison & Connor, 2002; NICHD ECCRN, 2003; Rutter & Maughan, 2002).

The measure assesses three primary domains of classroom climate: Emotional Support, Classroom Organization, and Instructional Support. Each broad domain comprises several specific subscales used to operationalize the types of interactions that compose each domain. Each subscale, in turn, is represented by a set of behaviorally anchored, observable descriptors of interactions in the classroom (teacher–student, student–student) that observers use as guides in establishing a single rating for the subscale.

Emotional Support comprises four subscales: Positive Climate (i.e., the level of respect, warmth, enjoyment, and emotional connection evident in student–teacher relationships and peer interac-

tions), Negative Climate (i.e., the level of disrespect, anger, hostility, or aggression exhibited by teachers and/or students), Teacher Sensitivity (i.e., teachers' consistency and effectiveness in responding to students' academic and emotional needs), and Regard for Student Perspectives (i.e., degree to which activities encourage student autonomy and emphasize students' interests, motivations, and points of view). Classroom Organization includes three subscales: Behavior Management (i.e., frequency of disruptive behavior and teachers' effectiveness in monitoring, preventing, and redirecting misbehavior), Productivity (i.e., how consistently learning is maximized with clear activities and routines, teacher preparation, efficient transitions, and minimal disruptions), and Instructional Learning Formats (i.e., how well materials, modalities, and activities are used to engage students in learning). Instructional Support comprises two subscales: Concept Development (i.e., the degree to which activities and discussion promote higher order thinking skills and cognition) and Quality of Feedback (i.e., teachers' consistency in providing specific, process-oriented feedback and back-and-forth exchanges to extend students' learning).

The underlying three-domain structure of the CLASS has now been established through a series of confirmatory factor analyses with data from approximately 4,000 U.S. preschool through fifth-grade classrooms, providing strong evidence that classroom interactions comprise distinct emotional, organizational, and instructional domains and that the three-domain structure is applicable across the prekindergarten to fifth-grade years (Hamre et al., 2007). The CLASS has demonstrated both criterion and predictive validity. In preschool settings, each of the three domains of the CLASS has been positively and significantly correlated with the Early Childhood Environment Rating Scale–Revised (criterion validity), a common measure of quality in early childhood classrooms, and most notably with the interactions factor ($r_s = .45-.63$) that captures the extent to which teacher–child interactions are promoted, children are encouraged to communicate and use language, and effective discipline is provided (Pianta, La Paro, & Hamre, 2008). CLASS domains have also been related to children's social and academic development (predictive validity) during both the preschool (e.g., Howes et al., 2008) and elementary school years (e.g., Pianta, Belsky, et al., 2008). For example, after adjusting for selection effects and prior student functioning, observed Emotional Support has been found to predict standardized early literacy test scores in preschool and first grade (NICHD ECCRN, 2003), lower maternal reports of internalizing behaviors in kindergarten and first grade (NICHD ECCRN, 2003), and

Table 3

Intercorrelations Among Classroom Outcome Scales and Teacher Social–Emotional Functioning Variables

Variable	1	2	3	4	5	6
1. Classroom quality	—	.93**	.86**	.89**	-.13	.15
2. Emotional support		—	.72**	.74**	-.19	.11
3. Instructional support			—	.67**	-.03	.19
4. Classroom organization				—	-.08	.12
5. Burnout					—	-.25*
6. Emotional ability						—

Note. Correlations are based on data for classroom quality and its domains collected at Wave 2 (spring 2005) and data on burnout and emotional ability collected at baseline (fall 2004).

* $p < .05$. ** $p < .01$.

students' positive behavioral engagement in the classroom in first grade (NICHD ECCRN, 2002). Similarly, observed Instructional Support has been found to predict academic functioning in preschool (Howes et al., 2008) and positive behavioral engagement in the first-grade classroom (NICHD ECCRN, 2003). Further, exposure to classrooms high in Emotional Support and Instructional Support has been associated with reducing the gap in achievement between high- and low-risk first graders (Hamre & Pianta, 2005). Taken together, these results provide strong evidence for the use of the CLASS as a valid observational instrument for assessing key aspects of classroom processes across varied student bodies and grade levels.

Consistent with its use in other studies, subscales of the CLASS received a single rating ranging from 1 to 7, which is guided by a set of behaviorally anchored descriptors of the types of interactions that constitute the subscale. Classroom observers completed ratings on each of the nine subscales for each observational segment. Typically, subscale ratings were obtained for four segments (see Procedure), and a composite was created for each subscale based on an average of the ratings across all segments. CLASS constructs Emotional Support, Classroom Organization, and Instructional Support were then computed as the mean across subscale composites. Internal reliability was .90 for Emotional Support, .83 for Classroom Organization, and .90 for Instructional Support. Given the high correlations among these three constructs (.67–.74), a composite index of overall classroom quality was computed as the mean across all nine subscale composites. Internal reliability for this scale was .93.

During the second wave of the study (spring, third grade), 82 observations of classrooms were conducted by trained classroom observers who were kept blind to the intervention status of the schools by the research team.² Twelve percent of these observations were double-coded to ensure reliability of observations as conducted in the field. For double-coded observations, two trained observers coded the same classroom simultaneously and independently. Interrater reliability was assessed as the degree to which two coders were within one point of each other's scores (La Paro, Pianta, & Stuhlman, 2004). Interrater reliability for the classroom quality subscales was .89 for Emotional Support, .79 for Instructional Support, and .76 for Classroom Organization. Interrater reliability for overall Classroom Quality was .83.

Teacher burnout. Teacher burnout in relation to teachers' work as educators was assessed with the 22-item Maslach Burnout Inventory–Educators Survey (Maslach et al., 1996). This measure is designed to assess three aspects of stress and burnout among teachers: emotional exhaustion (nine items), depersonalization (five items), and sense of personal accomplishment (eight items). Emotional exhaustion assesses feelings of being emotionally overextended and exhausted by one's work (e.g., "I feel fatigued when I get up in the morning and have to face another day on the job"), depersonalization assesses an unfeeling and impersonal response toward students (e.g., "I feel I treat some students as if they were impersonal objects"), and personal accomplishment assesses feelings of competence and successful achievement in one's work (e.g., "I feel exhilarated after working closely with my students"). Responses are indicated on a 7-point Likert scale ranging from 0 (*never*) to 6 (*every day*). For the purposes of the present study, a total teacher burnout score was computed as an average of 18 of the original 22 items.³ The internal reliabilities of the 18-item total

burnout scale were adequate in fall 2004 and spring 2005 ($\alpha = .87$ –.91, respectively).

Teachers' perceived emotional ability. Teachers' perceived emotional ability was assessed with the 23-item Perceived Emotional Intelligence Scale (Brackett & Mayer, 2003). This measure assesses several key aspects of emotional ability including the ability to perceive the emotions of others (e.g., "By looking at people's facial expressions, I recognize the emotions they are experiencing"), access and understand one's own emotions (e.g., "I have a rich vocabulary to describe my emotions"), and regulate one's emotions (e.g., "When I'm in a bad mood, it takes me a long time to get over it"). Respondents indicate for each item how accurately or inaccurately the item describes them. Responses are indicated on a 5-point Likert scale ranging from 1 (*very inaccurate*) to 5 (*very accurate*). For the purposes of the present study and based on the results of confirmatory factor analyses, a total score based on an average of 17 of the original 23 items was computed for both fall 2004 and spring 2005 assessments. The internal reliabilities of the total perceived emotional ability scale were adequate in fall 2004 and spring 2005 ($\alpha = .85$ –.87, respectively).

Results

Separate two-level hierarchical linear models were used to (a) examine the influence of baseline teacher social-emotional functioning on classroom climate, (b) estimate the experimental impact of the 4Rs Program on classroom climate, and (c) examine whether the impact of intervention is moderated by these indicators of teacher functioning. All analyses were conducted with the hierarchical linear modeling software package HLM (Version 6.02), with full maximum likelihood estimation used for all models. Hierarchical linear modeling allows for the simultaneous estimation of variance associated with individual (between classrooms) and population (between schools) components based on the specification of fixed- and random-effect variables in the model (Bryk & Raudenbush, 1992). As a result, standard errors are appropriately adjusted for nonindependence due to the clustering of classrooms within schools. Specifically, in the first model (Model A), variation in classroom climate at spring 2005 (after one year of intervention) is estimated as a function of teacher factors at Level 1 (including teacher burnout and perceived emotional ability)⁴ and school factors at Level 2 (including treatment status and eight dummy variables representing school matched-pair status). In the second model (Model B), cross-level interactions between treat-

² Four items were dropped from the computation of the total scale based on confirmatory factor analyses that were conducted to demonstrate that the manifest construct indicators of overall teacher burnout represented the hypothesized latent phenomena for the current sample and to ensure factorial invariance of the latent construct across time (Little, 1997).

³ It is possible some coders made inferences about intervention status based on the presence of 4Rs Program materials in a school or classroom.

⁴ To reduce potential confounds in our estimates of teacher social-emotional functioning indicators and intervention impacts on observed classroom quality, we included as covariates in Level 1 of each model dummy variables representing teacher race-ethnicity and a dichotomous variable indicating classroom status as a general or special education classroom but did not report them.

ment status and classroom and teacher factors are included at Level 2 to test whether these factors moderate the impact of the 4Rs intervention on classroom climate.

As shown in Table 4 (Model A), there is a significant main effect for teachers' perceived emotional ability ($t = 2.31, p < .03$, effect size [ES] = .52) such that higher levels of teachers' perceived emotional ability at the beginning of the school year was related to higher observed classroom quality at the end of the school year. Teacher burnout was not related to overall classroom climate. Also, as shown in Table 4 (Model A), treatment status is significantly related to classroom quality ($t = 2.76, p < .03$, ES = .70), indicating that over and above teachers' social-emotional functioning, there is a significantly higher mean level of observed classroom quality in intervention school classrooms compared with control school classrooms at the end of the first year. As shown in Table 4 (Model B), teachers' perceived emotional ability did not, however, moderate the effect of intervention on classroom climate.

Although the three subscales composing overall classroom climate were highly positively correlated ($r_s = .67-.74$), we conducted post hoc analyses to examine the specificity of direct and moderated intervention impacts on the three subdomains of classroom quality: classroom emotional support, instructional support, and organization. These analyses followed the same form as the primary analyses described above.

As shown in Table 5 (Model A), differences by treatment status in levels of classroom emotional support (now at the trend level, $t = 2.24, p < .06$, ES = .49) suggest higher average levels of emotional support in intervention school classrooms than control school classrooms, over and above teacher social-emotional functioning indicators. As shown in Table 5 (Model B), none of the teacher social-emotional functioning indicators appear to moderate the impact of intervention on classroom emotional support.

As shown in Table 6 (Model A), consistent with the results for overall classroom quality, higher levels of teachers' perceived emotional ability were related to higher levels of classroom instructional support ($t = 2.11, p < .05$, ES = .54). Differences by treatment status are also seen in levels of classroom instructional support ($t = 3.07, p < .02$, ES = .81), demonstrating higher average levels of instructional support in intervention school classrooms than control school classrooms. As shown in Table 6 (Model B), teachers' perceived emotional ability does not moderate the impact of intervention on classroom instructional support.

Finally, as shown in Table 7 (Model A), higher levels of teachers' perceived emotional ability were related to higher levels of classroom organization ($t = 2.22, p < .04$, ES = .51). No treatment status differences were found in levels of classroom organization (see Table 7, Model A), and as shown in Table 7 (Model B), teachers' perceived emotional ability did not moderate the impact of intervention on classroom instructional support.

Discussion

This article addresses a number of important limitations in our current understanding of teacher- and intervention-related influences on the quality of elementary school classroom processes by capitalizing on recent advances in the ability to reliably and validly rate a targeted set of classroom-level social processes known to be associated with children's social-emotional and academic development (Hamre & Pianta, 2005, 2007; Hamre et al., 2007; Pianta, La Paro, & Hamre, 2008). First, this study focused on ratings of key classroom processes obtained from independent classroom observers trained to reliability in the use of the CLASS, a standardized classroom observation protocol that allows for behaviorally anchored ratings of teaching behaviors and teacher-child interactions that index dimensions of emotional, organizational, and instructional classroom processes. These domains of classroom interactions have been found to predict later student academic and social-emotional functioning (NICHD ECCRN, 2002, 2003), and the three-domain structure of classroom interactions has been shown to be generalizable across a variety of racially, ethnically, and economically diverse samples ranging from preschool to fifth grade (Hamre et al., 2007), making the CLASS a uniquely rigorous instrument for reliably and validly assessing classroom processes. The present study builds on this theoretical and methodological advance in the "science of classrooms" by examining whether teacher social-emotional functioning and universal school-based intervention produce meaningful differences in the quality of these observed classroom processes.

Second, although prior studies have reported associations between teachers' psychological functioning and demographic characteristics and the quality of their interactions with children in prekindergarten classrooms (Hamre & Pianta, 2004; LoCasale-Crouch et al., 2007), this study is the only one to our knowledge to examine how quality of classroom processes in elementary schools is forecasted by teacher social-emotional functioning as

Table 4
Year 1 4Rs Treatment Impacts on Classroom Quality in Spring 2005 of Third Grade

Variable	Model A					Model B				
	Estimate	SE	df	t	p	Estimate	SE	df	t	p
Predictors										
Intercept	1.59	1.09	8	1.46	.18					
Treatment status	0.53	0.19	8	2.76	.03					
Burnout	0.04	0.15	17	0.28	.78					
Emotional ability	0.49	0.21	17	2.31	.03					
Treatment Status \times Burnout						-0.26	0.25	16	-1.03	.32
Treatment Status \times Emotional Ability						0.09	0.44	16	0.20	.85

Note. Eight dummy variables representing the eight best school-level matched pairs are included in all models at the school level (Level 2), with Pair 9 serving as the referent group. Estimates are unstandardized.

Table 5
Year 1 4Rs Treatment Impacts on Classroom Emotional Support in Spring 2005 of Third Grade

Variable	Model A					Model B				
	Estimate	SE	df	t	p	Estimate	SE	df	t	p
Predictors										
Intercept	2.50	1.36	8	1.84	.10					
Treatment status	0.42	0.19	8	2.24	.06					
Burnout	0.00	0.15	17	0.03	.98					
Emotional ability	0.33	0.27	17	1.22	.24					
Treatment Status \times Burnout						-0.20	0.29	16	-0.68	.50
Treatment Status \times Emotional Ability						-0.07	0.52	16	-0.14	.89

Note. Eight dummy variables representing the eight best school-level matched pairs are included in all models at the school level (Level 2), with Pair 9 serving as the referent group. Estimates are unstandardized.

indexed by their perceived emotional abilities and their experiences of job-related burnout. Unexpectedly, teachers' experiences of job-related burnout were not related to differences in overall classroom quality. But as predicted, teachers' perceptions of their own emotional abilities (e.g., recognizing the emotions of others, understanding and regulating one's own emotions) at the outset of the year were positively and strongly ($ES = .52$) related to their ability to establish high-quality social processes in their classrooms by the end of the school year.

Post hoc analyses of the influence of teacher factors on the three subdimensions of the CLASS indicated positive effects of teachers' perceived emotional abilities on classroom instructional support and classroom organization but not on emotional support. Although it is not uncommon for teachers' self-reported abilities to fail to predict their behaviors in the same domain, it is somewhat surprising that their self-perceived emotional abilities are related to supportive teacher behaviors and student-teacher interactions in the instructional and organizational domains. It appears that our assessment of teachers' perceived emotional abilities may be indexing other underlying aspects of teacher functioning that translate not into emotionally supportive behaviors and interactions per se but rather into a greater ability to manage their emotions in a manner that enables them to more effectively organize their classroom, engage with students, and maximize high-quality, productive learning time. Indeed, these results and preliminary results from other studies (Brackett & Katulak, 2007) suggest that explicit

attention to the promotion of emotional intelligence among teachers may be a critical component of school-based interventions designed to positively impact classroom settings.

Third, there is currently clear experimental evidence of the positive impact of school-based interventions on indices of classroom quality in prekindergarten and early elementary school classrooms (CPPRG, 1999; Raver et al., 2008). The present study, however, is the first to date to combine (a) the use of a school-randomized experimental design to test the causal impacts of a universal school-based intervention on an empirically validated assessment of classroom quality in a population of middle elementary school classrooms (i.e., third grade), (b) the test of an intervention that explicitly targets the transformation of classroom settings via teachers who are trained and supported in providing instruction that embeds social-emotional skills into a balanced literacy curriculum, (c) the test of the direct effects of intervention on classroom quality controlling for teacher social-emotional factors, and (d) the test of whether the impact of intervention on classroom quality is moderated by teacher social-emotional factors.

Findings indicate that at the end of one school year, the quality of classroom social processes as rated by independent observers blind to the intervention status of the schools was significantly higher in 4Rs schools compared with control schools, even after controlling for a limited set of classroom characteristics and indicators of teacher social-emotional functioning. Importantly, nei-

Table 6
Year 1 4Rs Treatment Impacts on Classroom Instructional Support in Spring 2005 of Third Grade

Variable	Model A					Model B				
	Estimate	SE	df	t	p	Estimate	SE	df	t	p
Predictors										
Intercept	-0.12	1.56	8	-0.07	.94					
Treatment status	0.80	0.26	8	3.07	.02					
Burnout	0.09	0.18	17	0.53	.60					
Emotional ability	0.65	0.31	17	2.11	.05					
Treatment Status \times Burnout						-0.27	0.31	16	-0.88	.40
Treatment Status \times Emotional Ability						0.15	0.59	16	0.25	.80

Note. Eight dummy variables representing the eight best school-level matched pairs are included in all models at the school level (Level 2), with Pair 9 serving as the referent group. Estimates are unstandardized.

Table 7
Year 1 4Rs Treatment Impacts on Classroom Organization in Spring 2005 of Third Grade

Variable	Model A					Model B				
	Estimate	SE	df	t	p	Estimate	SE	df	t	p
Predictors										
Intercept	1.92	1.20	8	1.59	.15					
Treatment status	0.32	0.22	8	1.47	.18					
Burnout	0.12	0.17	17	0.68	.51					
Emotional ability	0.52	0.23	17	2.22	.04					
Treatment Status \times Burnout						−0.44	0.29	16	−1.51	.15
Treatment Status \times Emotional Ability						0.06	0.47	16	0.14	.89

Note. Eight dummy variables representing the eight best school-level matched pairs are included in all models at the school level (Level 2), with Pair 9 serving as the referent group. Estimates are unstandardized.

ther of the teacher factors, including perceived emotional ability, moderated the impact of intervention on overall classroom quality, suggesting that the effects of 4Rs intervention are robust at least across this targeted set of teacher social–emotional functioning indicators.

Post hoc analyses revealed a significant intervention effect on levels of classroom emotional support (significant at the trend level) and classroom instructional support but not classroom organization. These findings are both consistent with and extend the results of Raver et al. (2008). In that study, classrooms with teachers who had received behavior management training and a weekly classroom-based mental health consultant were observed to have significantly higher levels of positive classroom climate, teacher sensitivity, and behavior management, subscales of the CLASS associated with the broader dimensions of classroom emotional support (positive climate, teacher sensitivity) and classroom organization (behavior management). Both the CSRP and the 4Rs Program appear effective in promoting emotionally supportive teacher behaviors and teacher–student interactions, the former in preschool classroom settings and the latter in middle elementary school classrooms. In contrast, the 4Rs Program did not produce impacts on classroom organization, whereas the CSRP intervention, likely due to its specific intervention focus on behavior management, demonstrated positive effects on this subdomain, although no other subdomains of classroom organization were tested. Lastly, although not tested in the CSRP evaluation, the 4Rs Program appears effective in promoting higher quality instructional interactions and supports for students (e.g., concept development, quality of feedback). Reflecting a developmental-contextual approach (Bronfenbrenner & Morris, 1998; Lerner, 1998) to the understanding of development and prevention, the current study provides compelling evidence that key proximal processes in the microcontexts of children's elementary school classrooms are sensitive to improvement via school- and classroom-based intervention effects. Additional research will be needed to examine whether these intervention-related changes in classroom processes mediate the relationship between intervention and student academic and social–emotional outcomes.

Reflecting the primary findings on overall quality of classroom social processes, none of the classroom or teacher factors were found to moderate the impact of intervention on the specific domains of classroom emotional or instructional support.

Nonsignificant intervention effects on classroom processes associated with classroom organization suggests that though highly correlated with classroom emotional and instructional support (.67–.74, respectively), this dimension of classroom process is not independently sensitive to the 4Rs intervention at the end of one year of implementation. This finding is somewhat surprising, particularly given the program's emphasis on improving teachers' behavior management abilities (e.g., effectively monitoring, preventing, and redirecting disruptive behavior). Yet this is only one of the three subscales composing the classroom organization domain, and because the 4Rs Program focuses less explicitly on the other two aspects of this domain—Productivity (e.g., efficient management and use of instructional time) and Instructional Learning Formats (e.g., provision of activities or materials to maximize learning time and opportunities)—intervention induced changes in the broader classroom organization domain may require more than one year of exposure to the program and/or a revision in the focus of the 4Rs intervention. Although the program generally promotes classroom organization through structured and consistent implementation of the 4Rs curriculum, the teacher training and curriculum itself prioritize teachers' attention to the emotional dimensions (e.g., demonstrating respect for students, noticing and addressing student needs, providing opportunities for student talk and expression) and instructional dimensions (e.g., use of discussions and activities that encourage analytic and reasoning skills such as problem solving, consistent provision of high-quality exchanges and feedback loops) of their behaviors and interactions with students in the classroom.

This study has several important strengths, but there are a number of limitations that must be noted. First, although almost all third-grade classrooms across the 18 school participating in the first year of the study were included in this analysis ($n = 82$), this relatively small sample of classrooms limited the power of the analyses reported here and constrained our ability to simultaneously control for and estimate the moderating impacts of other potentially important classroom characteristics (e.g., classroom size and compositional features such as student racial and ethnic diversity and classroom-aggregated levels of student behavioral and academic risk) and teacher characteristics (e.g., teacher years of experience) on quality of classroom processes. These limitations and constraints will be addressed in the future through analyses of intervention impact on classroom processes from the second and

third years of the study in which we observed and rated classroom processes in all third- and fourth-grade and then third-, fourth-, and fifth-grade classrooms, respectively, substantially increasing the size of our classroom sample in each of the subsequent years.

Second, the findings presented in this article represent point-in-time estimates of intervention effects on the quality of classroom processes at the end of the first year. Although this does not at all detract from the strength of the experimental contrast at that point in time, it does not allow us to draw any inferences regarding the impact of 4Rs on the form of change in classroom processes over one school year.

Third, although the overall alpha coefficient for the Classroom Organization subscale was adequate (.83), it was lower than the alpha coefficients of Emotional and Instructional Support subscales (.90 for each), and interrater reliability for this scale based on the double-coding of 12% of the classrooms (.76) was slightly lower than the expected 80% reliability criterion. The modest reliability of the Classroom Organization dimension could possibly account for null intervention impacts on this dimension of classroom quality. Fortunately, subsequent waves of classroom observation data in Years 2 and 3 provided an opportunity to double-code approximately 20% of all classrooms, and continued training of raters leads us to expect interrater reliability would be above threshold.

Fourth, the nature of the intervention itself, and the design of the evaluation, does not enable us to disentangle which specific components of the intervention were related to classroom quality. Although it is likely a combination of teacher training, ongoing coaching, and teacher implementation of the curriculum, the relative benefits of these components remains unknown.

Finally, the intervention effects on quality of classroom processes reported in this article were based on a sample of third-grade classrooms from a small number of urban public elementary schools that are attended in large majority by low-income Black/African American and Hispanic/Latino students. Although the findings of positive program impacts on key features of classroom processes are encouraging, our conclusions about the effectiveness of this intervention in modifying important features of classrooms must remain limited to the geographic and demographic characteristics of this sample. Further research will be needed to examine whether the effects reported here will be replicated in tests of this or other setting-focused interventions in suburban or rural school systems serving middle and higher income students, for example.

Despite these limitations, the results of this study advance our understanding of teacher- and intervention-based sources of influence on elementary school classroom processes known to influence student academic and social-emotional development. This study extends prior research that demonstrated links between quality of teacher-student interactions and teacher psychological and demographic characteristics (Hamre & Pianta, 2004; LoCasale-Crouch et al., 2007), suggesting that teacher perceptions of their emotional skills are also an important source of influence on the quality of the interactions characterizing instructional and organizational processes in the classroom. Most important, this study also provides strong experimental evidence that teacher training and support in the delivery of an integrated social-emotional learning and literacy intervention can positively affect elementary school classroom social processes, particularly processes associated with the provision of emotional and instructionally supportive

environments. Intervention impacts on classroom quality were robust at least across a selected number of classroom and teacher sociodemographic and social-emotional functioning factors. Research in early childhood classroom settings has found few consistent associations between classroom quality and teachers' education level per se (Early et al., 2006; NICHD ECCRN, 2005; Pianta, Howes, et al., 2005). However, if future studies provide additional support for the influence of teacher social-emotional competence and school-based social-emotional learning interventions on classroom quality, then schools of education and school systems themselves will need to carefully consider the implications of these findings for the assessment and promotion of such competencies in teacher selection and training processes and practices.

References

- Abidin, R. R., & Robinson, L. L. (2002). Stress, biases, or professionalism: What drives teachers' referral judgments of students with challenging behaviors? *Journal of Emotional and Behavioral Disorders, 10*(4), 204–212.
- Adalbjarnardottir, S., & Selman, R. L. (1997). "I feel I have received a new vision": An analysis of teachers' professional development as they work with students on interpersonal issues. *Teaching and Teacher Education, 13*(4), 409–428.
- Baker, J. A. (1999). Teacher-student interaction in urban at-risk classrooms: Differential behavior, relationship quality, and student satisfaction with school. *Elementary School Journal, 100*(1), 57–70.
- Barbareis, W. J., & Olson, R. D. (1998). An ADHD educational intervention for elementary school teachers: A pilot study. *Journal of Developmental & Behavioral Pediatrics, 19*(2), 94–100.
- Bloom, H. S. (Ed.). (2005). *Learning more from social experiments: Evolving analytic approaches*. New York, NY: Russell Sage Foundation.
- Brackett, M. A., & Katulak, N. A. (2007). Emotional intelligence in the classroom: Skill-based training for teachers and students. In J. Ciarrochi & J. D. Mayer (Eds.), *Applying emotional intelligence: A practitioner's guide* (pp. 1–27). New York, NY: Psychology Press.
- Brackett, M. A., & Mayer, J. D. (2003). Convergent, discriminant, and incremental validity of competing measures of emotional intelligence. *Personality and Social Psychology Bulletin, 29*(9), 1147–1158.
- Brock, L. L., Nishida, T. K., Chiong, C., Grimm, K. J., & Rimm-Kaufman, S. E. (2008). Children's perceptions of the classroom environment and social and academic performance: A longitudinal analysis of the contribution of the Responsive Classroom approach. *Journal of School Psychology, 46*(2), 129–149.
- Bronfenbrenner, U., & Morris, P. A. (1998). The ecology of developmental processes. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 993–1028). Hoboken, NJ: Wiley.
- Bryk, A. S., & Raudenbush, S. W. (1992). *Hierarchical linear models: Applications and data analysis methods*. Newbury Park, CA: Sage.
- Cameron, C. E., Connor, C. M., & Morrison, F. J. (2005). Effects of variation in teacher organization on classroom functioning. *Journal of School Psychology, 43*(1), 61–85.
- Cohen, D. K., Raudenbush, S. W., & Ball, D. L. (2003). Resources, instruction, and research. *Educational Evaluation and Policy Analysis, 25*(2), 119–142.
- Collaborative for Academic, Social, and Emotional Learning. (2003). *Safe and sound: An education leader's guide to evidence-based social and emotional learning (SEL) programs*. Retrieved from http://www.casel.org/downloads/Safe%20and%20Sound/1A_Safe_&_Sound.pdf
- Conduct Problems Prevention Research Group. (1999). Initial impact of

- the Fast Track prevention trial for conduct problems: II. Classroom effects. *Journal of Consulting and Clinical Psychology*, 67(5), 648–657.
- Cook, T. D., Murphy, R. F., & Hunt, D. H. (2000). Comer's school development program in Chicago: A theory-based evaluation. *American Educational Research Journal*, 37(2), 535–597.
- Daniels, D. H., & Shumow, L. (2003). Child development and classroom teaching: A review of the literature and implications for educating teachers. *Journal of Applied Developmental Psychology*, 23(5), 495–526.
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. (2009). *The effects of social and emotional learning on the behavior and academic performance of school children*. Manuscript submitted for publication.
- Early, D. M., Bryant, D. M., Pianta, R. C., Clifford, R. M., Burchinal, M. R., Ritchie, S., . . . Barbarin, O. (2006). Are teachers' education, major, and credentials related to classroom quality and children's academic gains in pre-kindergarten? *Early Childhood Research Quarterly*, 21, 174–195.
- Elias, M. J., Zins, J. E., Weissberg, K. S., Frey, K. S., Greenberg, M. T., Haynes, N. M., . . . Shriver, T. P. (1997). *Promoting social and emotional learning: Guidelines for educators*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Emmer, E. T., & Stough, L. M. (2001). Classroom management: A critical part of educational psychology, with implications for teacher education. *Educational Psychologist*, 36(2), 103–112.
- Flannery, D. J., Vazsonyi, A. T., Liao, A. K., Guo, S., Powell, K. E., Atha, H., . . . Embry, D. (2003). Initial behavior outcomes for the PeaceBuilders universal school-based violence prevention program. *Developmental Psychology*, 39(2), 292–308.
- Fraser, B. J., & O'Brien, P. (1985). Student and teacher perceptions of the environment of elementary school classrooms. *Elementary School Journal*, 85(5), 566–580.
- Fullan, M. (2001). *The new meaning of educational change* (3rd ed.). New York, NY: Teachers College Press.
- Gold, Y. (1984). Factorial validity of the Maslach Burnout Inventory in a sample of California elementary and junior high school classroom teachers. *Educational and Psychological Measurement*, 44(4), 1009–1016.
- Greenberg, M. T., Domitrovich, C., & Bumbarger, B. (2001). The prevention of mental disorders in school-aged children: Current state of the field. *Prevention & Treatment*, 4, ArtD 1a.
- Greene, R. W., Beszterczey, S. K., Katzenstein, T., Park, K., & Goring, J. (2002). Are students with ADHD more stressful to teach? Patterns of teacher stress in an elementary school sample. *Journal of Emotional and Behavioral Disorders*, 10(2), 79–89.
- Hamre, B. K., & Pianta, R. C. (2001). Early teacher–child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72(2), 625–638.
- Hamre, B. K., & Pianta, R. C. (2004). Self-reported depression in nonfamilial caregivers: Prevalence and associations with caregiver behavior in child-care settings. *Early Childhood Research Quarterly*, 19(2), 297–318.
- Hamre, B. K., & Pianta, R. C. (2005). Can instructional and emotional support in the first-grade classroom make a difference for children at risk of school failure? *Child Development*, 76(5), 949–967.
- Hamre, B. K., & Pianta, R. C. (2007). Learning opportunities in preschool and early elementary classrooms. In R. C. Pianta, M. J. Cox, & K. L. Snow (Eds.), *School readiness and the transition to kindergarten in the era of accountability* (pp. 49–84). Baltimore, MD: Brookes.
- Hamre, B. K., Pianta, R. C., Mashburn, A. J., & Downer, J. T. (2007). *Building a science of classrooms: Applications of the CLASS Framework in over 4,000 U.S. early childhood and elementary classrooms*. Retrieved from Foundation for Child Development website: http://www.fcd-us.org/ur_doc/BuildingAScienceOfClassroomsPiantaHamre.pdf
- Hauer, J. (2003). Educating for character and teachers' moral vitality. *Journal of Research in Character Education*, 1(1), 33–44.
- Hinshaw, S. P. (1992). Externalizing behavior problems and academic underachievement in childhood and adolescence: Causal relationships and underlying mechanisms. *Psychological Bulletin*, 111(1), 127–155.
- Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2008). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early Childhood Research Quarterly*, 23, 27–50.
- Institute of Medicine. (1994). *Reducing risks for mental disorders: Frontiers for preventive intervention research*. Washington, DC: National Academy Press.
- Jones, S. M., Brown J. L., & Aber, J. L. (in press). The longitudinal impact of a universal school-based social–emotional and literacy intervention: An experiment in translational developmental research. *Child Development*.
- Jones, S. M., Brown J. L., Hoglund, W., & Aber, J. L. (in press). Impacts of an integrated school-based social–emotional learning and literacy intervention on third-grade social–emotional and academic outcomes. *Journal of Consulting and Clinical Psychology*.
- 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.
- Kellam, S. G., Ling, X., Merisca, R., Brown, C. H., & Ialongo, N. (1998). The effect of the level of aggression in the first grade classroom on the course and malleability of aggressive behavior into middle school. *Development and Psychopathology*, 10(2), 165–186.
- Kontos, S., & Wilcox-Herzog, A. (1997). Teachers' interactions with children: Why are they so important? *Young Children*, 52(2), 4–12.
- Ladd, G. W., & Burgess, K. B. (1999). Charting the relationship trajectories of aggressive, withdrawn, and aggressive/withdrawn children during early grade school. *Child Development*, 70(4), 910–929.
- La Paro, K. M., Pianta, R. C., & Stuhlman, M. (2004). The Classroom Assessment Scoring System: Findings from the prekindergarten year. *Elementary School Journal*, 104(5), 409–426.
- Lerner, R. M. (1998). Theories of human development: Contemporary perspectives. In W. Damon & R. M. Lerner (Eds.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (5th ed., pp. 1–24). Hoboken, NJ: Wiley.
- Little, T. D. (1997). Mean and covariance structures (MACS) analyses of cross-cultural data: Practical and theoretical issues. *Multivariate Behavioral Research*, 32, 53–76.
- LoCasale-Crouch, J., Konold, T., Pianta, R., Howes, C., Burchinal, M., Bryant, D., . . . Barbarin, O. (2007). Observed classroom quality profiles in state-funded pre-kindergarten programs and associations with teacher, program, and classroom characteristics. *Early Childhood Research Quarterly*, 22, 3–17.
- Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). Maslach Burnout Inventory–Educators Survey (MBI-ES). In C. Maslach, S. E. Jackson, & M. P. Leiter, *Maslach Burnout Inventory manual* (3rd ed., pp. 27–32). Palo Alto, CA: Consulting Psychologists Press.
- Meehan, B. T., Hughes, J. N., & Cavell, T. A. (2003). Teacher–student relationships as compensatory resources for aggressive children. *Child Development*, 74(4), 1145–1157.
- Meyer, L. A., Wardrop, J. L., Hastings, C. N., & Linn, R. L. (1993). Effects of abilities and settings on kindergarteners' reading performance. *Journal of Educational Research*, 86(3), 142–160.
- Morrison, F. J., & Connor, C. M. (2002). Understanding schooling effects on early literacy: A working research strategy. *Journal of School Psychology*, 40(6), 493–500.
- National Institute of Child Health and Human Development Early Child Care Research Network. (2002). The relation of global first-grade classroom environment to structural classroom features and teacher and student behaviors. *Elementary School Journal*, 102(5), 367–387.

- National Institute of Child Health and Human Development Early Child Care Research Network. (2003). Social functioning in first grade: Associations with earlier home and child care predictors and with current classroom experiences. *Child Development*, 74(6), 1639–1662.
- National Institute of Child Health and Human Development Early Child Care Research Network. (2005). A day in third grade: A large scale study of classroom quality and teacher and student behavior. *Elementary School Journal*, 105(3), 305–323.
- National Research Council and Institute of Medicine. (2002). *Community programs to promote youth development. Committee on Community-Level Programs for Youth*. Washington, DC: National Academy Press.
- Nye, B., Konstantopoulos, S., & Hedges, L. V. (2004). How large are teacher effects? *Educational Evaluation and Policy Analysis*, 26, 237–257.
- Pianta, R. C. (1999). *Enhancing relationships between children and teachers*. Washington, DC: American Psychological Association.
- Pianta, R. C. (2006). Schools, schooling, and developmental psychopathology. In D. Cicchetti & D. Cohen (Eds.), *Developmental psychopathology: Vol. 1. Theory and methods* (2nd ed., pp. 494–529). Hoboken, NJ: Wiley.
- Pianta, R. C., Belsky, J., Vandergrift, N., Houts, R., & Morrison, F. J. (2008). Classroom effects on children's achievement trajectories in elementary school. *American Educational Research Journal*, 45(2), 365–397.
- Pianta, R. C., Howes, C., Burchinal, M., Bryant, D. M., Clifford, R. M., Early, D. M., & Barbarin, O. (2005). Features of pre-kindergarten programs, classrooms, and teachers: Do they predict observed classroom quality and child-teacher interactions? *Applied Developmental Science*, 9(3), 144–159.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2005). *Classroom Assessment Scoring System (CLASS)*. Unpublished measure, University of Virginia, Charlottesville.
- Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2008). *Classroom Assessment Scoring System (CLASS) manual, K–3*. Baltimore, MD: Brookes.
- Pianta, R. C., La Paro, K. M., Payne, C., Cox, M. J., & Bradley, R. (2002). The relation of kindergarten classroom environment to teacher, family, and school characteristics and child outcomes. *Elementary School Journal*, 102(3), 225–238.
- Pianta, R. C., Steinberg, M. S., & Rollins, K. B. (1995). The first two years of school: Teacher-child relationships and deflections in children's classroom adjustment. *Development and Psychopathology*, 7(2), 295–312.
- Pianta, R. C., & Stuhlman, M. W. (2004). Conceptualizing risk in relational terms: Associations among the quality of child-adult relationships prior to school entry and children's developmental outcomes in first grade. *Educational and Child Psychology*, 21, 32–45.
- Raver, C. C., Jones, S. M., Li-Grining, C. P., Metzger, M., Champion, K. M., & Sardin, L. (2008). Improving preschool classroom processes: Preliminary findings from a randomized trial implemented in Head Start settings. *Early Childhood Research Quarterly*, 23, 10–26.
- Rimm-Kaufman, S. E., La Paro, K. M., Downer, J. T., & Pianta, R. C. (2005). The contribution of classroom setting and quality of instruction to children's behavior in kindergarten classrooms. *Elementary School Journal*, 105(4), 377–394.
- Rowan, B., Correnti, R., & Miller, R. J. (2002). *What large-scale, survey research tells us about teacher effects on student achievement: Insights from the Prospects study of elementary schools* (CPRE Research Report No. RR-051). Philadelphia: Consortium for Policy Research in Education, University of Pennsylvania.
- Rutter, M., & Maughan, B. (2002). School effectiveness findings 1979–2002. *Journal of School Psychology*, 40(6), 451–475.
- Ryan, A. M., Gheen, M. H., & Midgley, C. (1998). Why do some students avoid asking for help? An examination of the interplay among students' academic efficacy, teachers' social-emotional role, and the classroom goal structure. *Journal of Educational Psychology*, 90(3), 528–535.
- Ryan, R. M., & Grolnick, W. S. (1986). Origins and pawns in the classroom: Self-report and projective assessments of individual differences in children's perceptions. *Journal of Personality and Social Psychology*, 50(3), 550–558.
- Sameroff, A. J. (1995). General systems theories and developmental psychopathology. In D. Cicchetti & D. J. Cohen (Eds.), *Developmental psychopathology: Vol. 1. Theory and methods* (pp. 659–695). New York, NY: Wiley.
- Selman, R. L. (2003). *The promotion of social awareness: Powerful lessons from the partnership of developmental theory and classroom practice*. New York, NY: Russell Sage Foundation.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Boston, MA: Houghton Mifflin.
- Solomon, D., Watson, M., Battistich, V., Schaps, E., & Delucchi, K. (1996). Creating classrooms that students experience as communities. *American Journal of Community Psychology*, 24(6), 719–748.
- Toro, P. A., Cowen, E. L., Gesten, E. L., Weissberg, R. P., Rapkin, B. D., & Davidson, E. (1985). Social environmental predictors of children's adjustment in elementary school classrooms. *American Journal of Community Psychology*, 13(4), 353–364.
- Tseng, V., & Seidman, E. (2007). A systems framework for understanding social settings. *American Journal of Community Psychology*, 39(3–4), 217–228.
- Webster-Stratton, C., Reid, J. M., & Hammond, M. (2001). Preventing conduct problems, promoting social competence: A parent and teacher training partnership in Head Start. *Journal of Clinical Child Psychology*, 30(3), 283–302.
- Wentzel, K. R. (2002). Are effective teachers like good parents? Teaching styles and student adjustment in early adolescence. *Child Development*, 73(1), 287–301.
- Yoon, J. S. (2002). Teacher characteristics as predictors of teacher-student relationships: Stress, negative affect, and self-efficacy. *Social Behavior and Personality*, 30(5), 485–493.

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