Do Emotional Support and Classroom Organization Earlier in the Year Set the Stage for Higher Quality Instruction?

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Background

Recommendations for elementary school teachers often advance the premise that establishing emotionally supportive and well-organized classroom environments early in the year contributes to improved instructional quality later in the year (Wong & Wong, 2004). Some professional development interventions, such as the Responsive Classroom® (RC) approach, explicitly prepare teachers to start the year by bolstering classroom emotional support and organization. The main premise behind efforts to improve classroom emotional support and organization early in the year is to provide a foundation for later improved academic instruction and, ultimately, improved student achievement (Denton & Kriete, 2000). Although this belief is widely held, there is surprisingly little empirical evidence examining this premise. The present study examines the extent to which earlier emotional and organizational supports are effective pathways to higher instructional support over the course of a school year. Furthermore, we examine whether the use of RC practices contributes to overall levels of emotional, organizational, and instructional supports and the extent to which randomized training in the RC approach relates to any of the associations that are found.

Research Questions & Hypotheses

1. Are there longitudinal associations among emotional support, classroom organization, and instructional support over the course of the school year? All combinations are tested as part of our analyses, but we specifically hypothesize positive associations between earlier emotional support and classroom organization with later instructional support.

2. Does use of RC practices contribute to higher levels of emotional support and classroom organization? We hypothesize that teachers who use more RC practices will be rated as having higher levels of emotional support and classroom organization.

3. Do the associations among emotional, organizational, and instructional supports vary as a function of random assignment to RC or control conditions? In this test, we examine whether the associations that are found generalize to both control and treatment schools. This is exploratory and thus we do not have specific hypotheses about whether the pattern of associations will differ by treatment status.

Participants

The present study uses data from a randomized controlled trial testing the efficacy of training teachers in the RC approach. Twenty-four schools from a single district in the mid-Atlantic were selected because of their interest in adopting the RC approach as part of a larger district-based initiative. Schools were randomized into intervention (n = 13) or waitlist control conditions (n = 11), stratified on the percentage of students eligible for free and reduced lunch and racial/ethnic minority composition. Independent t-tests revealed that treatment and control schools did not differ on these two variables upon randomization.

Third and fourth grade teachers from all 24 schools were invited to participate, resulting in a 95% response rate (n = 240). The teacher sample was approximately 90% female, 86% Caucasian, 5% African American, 3% Hispanic/Latino, and 2% Asian. On average, teachers were 39 years old with 10 years of teaching experience. Nearly 65% held a Masters degree.
Teachers in experimental and control conditions did not differ on these demographic variables, with the exception of race, in which the experimental group had a higher percentage of teachers of racial/ethnic minority.

**Intervention**

Teachers in the intervention condition received training in the RC approach, administered by the developers, the Northeast Foundation for Children (NEFC). In the summer of 2008, third and fourth grade teachers received training in RC1 - a weeklong institute focusing primarily on five of the 10 RC practices: Morning Meeting, Rule Creation, Interactive Modeling, Teacher Language, and Logical Consequences. These teachers were also supported with approximately three in-person consultations with NEFC coaches during the school year as well as supplemental books and newsletters pertaining to the RC approach. Fourth grade teachers subsequently received RC2, an additional weeklong training in the summer of 2009 which built on the RC1 training and also included information on the additional RC practices of Academic Choice, Classroom Organization, Guided Discovery, Collaborative Problem Solving, and Working with Families. These teachers were also provided with coaching consultations throughout the school year. Using the procedures described below, third grade teachers were observed in their first year of implementation of the RC approach (after RC1), and fourth grade teachers were observed in their second year of implementation (after RC2).

**Research Design: Description of the research design.**

Teachers were videotaped for one hour at each of five points spread throughout the year. There were three observation windows – fall, winter, and spring. Teachers were observed in each window during a mathematics lesson. During two of the three windows, teachers were also observed during morning instruction, separately from the mathematics observation. Observations did not systematically have a pattern of morning observations happening first or second within each observation windows. Mathematics lessons were observed for the entire duration of the lesson (approximately one hour). Morning observations lasted for one hour. Tapes were coded using two observation protocols, the Classroom Assessment Scoring System and the Classroom Practices Observational Measure, as described below.

**Data Collection and Analysis**

*Classroom Assessment Scoring System* (CLASS; Pianta, La Paro & Hamre, 2008). The CLASS is an observational classroom measure that captures the quality of teachers’ interactions with students. Ten dimensions are rated on a 7-point Likert scale (1 - low to 7 – high) and are subsequently aggregated into three empirically validated domains (Hamre et al., 2007) consistent with the manual. The Emotional Support domain consists of four dimensions: Positive Climate, Negative Climate (reversed), Teacher Sensitivity, and Regard for Student Perspectives. Emotional Support assesses the extent to which positive affect and relationships are evident, the teacher responds to students’ needs, and the teacher incorporates students’ ideas and interests into the instruction. The Classroom Organization domain consists of three dimensions: Behavior Management, Productivity, and Instructional Learning Formats. Classroom Organization encompasses teachers’ use of proactive discipline strategies, student engagement, and the general productivity of the class. The Instructional Support domain comprises three dimensions: Concept Development, Quality Feedback, and Language Modeling. Instructional Support captures teachers’ use of individualized feedback, promotion of higher order thinking skills, and use of
language in the classroom. Alphas from the present study’s data of these three domains (.78, .67, and .86, respectively) suggest adequate internal consistency.

Two 15-minute segments were sampled from each 60-minute observation. For morning observations, the two segments were comprised of minutes 15 through 30, and 30 through 45. For mathematics observations, the two segments were comprised of minutes 1 (the start of the mathematics lesson) through 15, and 30 through 45. These segments were individually coded by the trained observers blind to treatment condition and with little knowledge of the RC approach. Domain scores for a segment were created by averaging across the corresponding dimensions. The domain scores for the two segments were then averaged to create aggregated domain scores for that observation which served as the indicators for emotional support, classroom organization, and instructional support at each of the five time points.

The Classroom Practices Observational Measure (CPOM; Abry, Brewer, Nathanson, Sawyer, & Rimm-Kaufman, 2010) is an observational measure of teachers’ use of RC practices with sanitized wording so that the items could be coded in control classrooms. The 16-item version ($\alpha_{16} = .88$) was used during morning observations, whereas a shortened 10-item version ($\alpha_{10} = .65$), excluding items pertaining to the Morning Meeting, was administered during mathematics observations. Experimental and control classrooms were rated in the classroom by research assistants who knew little about the RC approach. Based on the full 60-minute observations, research assistants assigned a score of 1 (not at all characteristic) to 3 (very characteristic) for each of the items. Scores within each observation time point were aggregated to form a composite of teachers’ use of RC practices.

Our first research question was answered by building a cross-lagged autoregressive model in an SEM framework. The autoregressive aspect refers to a structure in which each variable is predicted by the same variable assessed at the previous time point. The cross-lagged aspect of the models refers to the aspect that subsequent models added in associations (one set at a time) across domains of quality across time. For example, emotional support at observations 1, 2, 3, and 4 were used to predict instructional support at observations 2, 3, 4, and 5, respectively. Only some models provided a better fit than the unconditional model. Thus, pairwise combinations of paths were tested to see if these models with two sets of paths fit better relative to the best fitting model with one set of paths. This model building technique allowed us to answer our first research question about longitudinal associations between domains of classroom supports.

The answer to the second research question was provided by examining the path coefficients from the measure of RC practices to the CLASS domains. Significant paths to emotional support and classroom organization would offer support for our hypotheses.

To answer our last research question, whether associations vary as a function of random assignment to treatment or control conditions, we ran a multi-group analysis based on treatment assignment. Chi-square difference tests revealed whether the structural paths based on the model built based on research question 1 generalized across groups.

**Findings**

Contrary to our hypotheses, no support was found for relations from earlier classroom organization to later instructional support. An association was found linking earlier emotional support to later instructional support. Additionally, an unhypothesized association was found from earlier instructional support to emotional support. Thus, the final, best fitting model had bidirectional, positive associations between emotional and instructional support (See Figure 1).
That is, higher levels of emotional support earlier in the year predicted higher instructional support later in the year. In turn, higher levels of instructional support earlier in the year predicted higher emotional support later in the year.

Teachers’ use of RC practices appeared to contribute to emotional support and classroom organization throughout the year, suggesting the malleability of this teacher characteristic.

The pattern of associations did not vary across treatment and control groups.

**Conclusions**

The cyclical relation between emotional and instructional support exemplifies the importance of understanding sequences that occur in classrooms over time. Teachers are constantly instructing and socializing children and children are continually eliciting reactions from their teachers. The relationships are bi-directional and reflect the reciprocal nature of the developmental process (Bronfenbrenner & Morris, 2006). Associations from emotional support to instructional support affirm the commonly held teacher intuition that creating a safe and supportive environment earlier in the year yields later instructional benefits (Denton & Kriete, 2000; Wong & Wong, 2004). Not only did greater emotional support lead to more instructional support, but greater instructional support led to greater emotional support, suggesting that closer relationships between teachers and students were forged by offering higher levels of instructional support. One plausible explanation is that as students engage in learning with higher levels of instructional support, students may experience more satisfaction and, as a result, draw closer to their teacher and peers on an emotional level.

One counterintuitive finding merits attention. Higher levels of classroom organization earlier in the year did not lead to more instructional support later in the year, as hypothesized. Thus, the findings indicate no spillover effects (beyond their concurrent associations) from earlier classroom organization to later instructional support. Thus, having a classroom that runs like a well-oiled machine with few behavioral interruptions may help facilitate engagement and even achievement, but doesn’t necessarily mean the teacher is set up to use better instructional practices. Notably, overall there was not a high degree of variability in classroom organization, which would make it more difficult to find associations.

Using RC practices was associated with higher levels of emotional and organizational supports, offering support for the idea that adoption of RC practices raises classroom quality. Although this study was a part of a randomized control trial, the longitudinal analyses themselves are correlational in nature. Thus, we cannot make a causal inference to state that use of RC practices caused differences in CLASS scores nor can we say that higher levels of emotional support caused higher levels of later instructional support or vice versa. However, the differences between treatment and control schools in the use of RC practices was causal.

The present study sheds light on our understanding of the sequential interactive processes that play out in classrooms. This sequence seems to involve a bidirectional interplay of emotional and instructional supports. Understanding the sequences that play out in a classroom is at the heart of understanding children’s development (Seidman, Tseng, & Weisner, 2006). Thus, the present study helps us to understand how classroom interactions shape students’ experiences over the course of a year and may be helpful in identifying trajectories likely to support or hinder children’s learning and development. The present study suggests that efforts to improve the social and emotional climate of classrooms may have the added benefit of setting the stage for better instruction. Additionally, supporting teachers’ use of RC practices may be one way to promote the development of the social-emotional and instructional climates in the classroom.
References


LONGITUDINAL CLASSROOM INTERACTIONS

Figure 1
Final cross-lagged autoregressive model showing unstandardized estimates